

INDEX.

Seventeenth Quarto Volume—January 1, 1885, to December 31, 1885.

ILLUSTRATIONS.

- Accident, Broken Wheel, 322
Accident, German Railroad, 17
Accident, Removable, 322
American Pneumatic Signals, 93, 93
Ames Automatic Car Coupler, 355
Ames Car Coupler, 616, 627
Angle-bar, Early, 210
Angle-bars, Broken, Found on a Single Inspection of
Two Miles of Double Track, 146
Angle Fish-plate, Newton's, 276
Archer Car Coupler, 616, 620
Austrian Diagrams for Estimating Quantities of
Girder Bridges, 450
Autographic Stress and Strain Diagrams, 708
Axle Lathe, Sellers' Double, 803
Balanced Valve, Delaney's, 740, 741
Baldwin Locomotive "Decapod," 274
Baldwin Mogul Locomotive for New South Wales,
104
Barres Car Coupler, 616
Barnhart's Steam Shovel and Wrecking Car, 100
B-ams, Form of, 690
Bird Car Coupler, 616
Boiler Drilling Machine, 469
Boiler, Lawson, 637
Boring and Drilling Machine, Improved Horizontal,
389
Boston Automatic Car Coupler, 616
Brake Diagrams, 312
Brake, Laufman Screw, 34
Break-Down Plant, Great Southern & Western Rail-
way of Ireland, 451
Bridge, Chestnut Street, in Philadelphia, 68, 69
Bridge Erecting Hoisting Engine, 565
Bridge Foundations, 116
Bridge Girders and Posts, Pittsburgh Junction Rail-
road, 164, 165
Bridge, Malmindot Viaduct, 468
Bridge, New Tay, 772
Bridge, St. John, 691, 692
Bridge Strut, Canadian Pacific, 742, 787
Bridges, Austrian Girder, Diagrams for Estimating
Quantities, 451
Bridges, Pittsburgh Junction Railroad, 216
Bridge, Sukkur, over the Indus, 805
Bridge Trusses, Collision Strut for, 742, 787
Bronzes, Tensile Strength of, 5, 5
Brown Car Coupler, 616
Bryant & Gilliland's Railroad Tamping Machine,
453
Car Axle Boxes, Expired Patents, 341
Car Axle Box, Standard, Saxon State Railroads,
771
Car Axle Lathe, Sellers' Double, 803
Car Check Chains, Diagram, 162
Car Coupler, Ames Automatic, 351
Car Coupler, Cowell Freight, 5
Car Coupler, Hilliard Freight, 5
Car Couplers Adopted at Buffalo, 626, 627, 628, 629
Car Couplers Tested at Buffalo, 616
Car, English Self-propelling Derrick, 325
Car, English Sleeping, Buenos Ayres Great Southern
Railway, 546
Car Framing, Howe Truss, 145
Car, Freight, Proposed Standard Truck, 404, 405
Car, Hand Derrick, 671
Car Platform Lamp, Pintsch, 314
Car, Russian Standard Box, 290, 291
Car Seat, Henry's Tilting Cushion, 802
Cars, Freight, End Platforms for, 675
Car, Standard, agage, Pittsburgh, Cincinnati & St.
Louis, 643, 645
Car, Steam Pile-driver, 338
Car-Tenoning and Gaining Machine, 593
Car, Ten-ton Hand Crane, 484, 485
Car Transfer at Portland, Oregon, 498, 499
Car Truck, Freight, Richmond & Danville, 228
Car Wheel, Axle and Tire Fastening, Standard Ger-
man, 1-6, 117
Car Wheel Flange, Proposed Standard, 370, 625
Car Wheel Sharp Flanges, 426
Car Wheels, Krupp's Steel-tired, 804
Car Wheel, Spring-plate Steel-tired, 260
Car Wheels, Steel-tired, Device for Turning on their
Axles, 389
Car Wheels, Turning Steel-tired, 130, 177, 388, 786
Car, Wrecking, and Steam Shovel, 100
Cement Testing Machine, 389
Chesapeake & Ohio Locomotive Coupling Rod, 226
Chesapeake & Ohio Locomotive Whistle, 354
Christie Steel Claw-bar, 394
Ciller's Railroad Ticket Holder, 148
Claw-bar, Christie Steel, 394
Conductor's Check Memorandum, 739
Cornell's Automatic Crossing Gates, 547
Cowell Car Coupler, 616, 620
Crane, Ten-ton Hand, 484, 485
Cranks, Setting at Right Angles, 506
Creeping of Rails, Diagrams, 67
Creeping of Rails, St. Louis Bridge, 5
Crossing Gates, Automatic, 547
Crossings and Turnouts, Pennsylvania Railroad
Standard, 770
Cross-tie Diagrams, 231
Culvert, Diagrams of, 51, 55, 211, 215
Culverts, Washington Aqueduct, 147
Curry Car Coupler, 616
Curtis & Wood Car Coupler, 616
Curve Diagrams, 645
Delaney Balanced Valve, 740, 741
Delaware, Lackawanna & Western Terminal
Stations in New York, 683, 689, 690
Derrick Car, Hand, 674
Derrick, English Self-propelling, 325
Dodge Railroad Stand Pipe, 467
Dowling Car Coupler, 616, 627
Driving and Boring Machine, Improved Horizontal,
389
Drill Press, New 30-inch, 372
Dunbar & Ruston's Steam Excavator, 734, 735
Eccentrics, Setting on Crank Axles, 578
Electric Bell Cord Coupling, 462
Electric Light, Adjustable, for Drafting Table, 178
Electric Street Railroad, German, 549
Emery Tool Grinder, Eberhardt's, 787
End Platforms for Freight Cars, 675
English Self-propelling Wrecking Derrick, 325
English Sleeping Carriage, 546
English Suburban Passenger Locomotive, 242, 243
English Tank Locomotive, Details, 819
Emery Wheel Tool Grinder, 227
Emmett Car Coupler, 616
Eureka Car Coupler, 616
Excavator, Steam, Diagrams, 820
Excavator, Dunbar & Ruston's Steam, 734, 735
Fairbanks' Automatic Cement Testing Machine, 389
Fast Run, Indianapolis, Decatur & Springfield, 675
Fast Run on the West Shore, 548, 549
Fay & Co., Double Planing and Matching Machine,
185
Fay & Co., Large Car Tenoning Machine, 593
Ferry Transfer at Portland, Oregon, 498, 499
Fire-box Sheets, Bulging of, 731
Fisher Rail Joint, 20
Fitzgerald & Van Dorn Car Coupler, 616
Flooring Machine, Woods' Fast Feeding, 466
Freight Car Truck, Proposed Standard, 404, 405
Friction, Journal, Apparatus for Testing in a Lathe,
331
Friction, Journal, Diagrams, 356, 474, 475
Friction of Slide Valves, Apparatus for Ascertain-
ing, 339
Frog Diagram, 451
Frog for Factory Sidings, German, 579
Frogless Switch, German, 579
Frogless Switch, Mansfield's, 612
Frogless Switch, Price's, 591, 593
Garverick Journal Box Jack, 243
Gauge-cock, Self-cleaning, 227
Georgetown, Breckenridge & Leadville Spiral, 763,
765
German Car Wheel, Axle and Tire Fastening, 116,
117
German Electric Street Railroad, 399
German Frog for Factory Sidings, 579
German Railroad, Accident, 17
Giant Hydraulic Jack, 731
Gifford Car Coupler, 616, 626
Glasgow & Southwestern Passenger Locomotive,
518, 519, 520
Gothard Railroad, Tunnel Spirals, 757
Gould & Eberhardt, 30-inch Drill Press, 372
Gould & Eberhardt, Swing Engine Lathe, 452
Grand Central Depot, New York, Interlocking
Signals and Switches, 162, 163
Great Eastern Railway Passenger Trains, Compar-
ative Dimensions, 578
Great Southern & Western Railway (Ireland), Break-
down Plant, 451
Guard Rail, Standard, Pennsylvania Railroad, 371,
532
Hall's Subaqueous Tunneling Caisson, 244
Hammer, Robeson's Gas, 432
Henry's Tilting Cushion Car Seat, 802
Hien Car Coupler, 616, 628
Hilliard Car Coupler, 5, 616
Hills Car Coupler, 616
Hitchcock Car Coupler, 616
Hoisting Engines, Lidgerwood, 178, 179
Hydraulic Jack, The Giant, 731
Indicator Diagrams, 2, 644, 645, 673
Indicator Diagrams from "El Gobernador," 644
Indicator Diagrams at High Speed, Philadelphia &
Reading, 673
Indicator Diagrams, Norfolk & Western, 615
Industrial Works Ten-ton Hand Crane, 484, 485
Injector, Automatic Re-starting, 34
Iron Planer, Improved, 18
Iron Sleeper, New York Central, 564
Iron Roofing Waterproof Joint for, 338
Janney Car Coupler, 616, 628
Jervis, John B., 49
Journal Box Jack, Garverick's, 293
Journal Friction, Apparatus for Testing in a Lathe,
331
Journal Friction Diagrams, 356, 474, 475
Joe Car Coupler, 616
"Joe Taverna Route," 556
Kansas City Cable Railroad, 483
Kelly Car Coupler, 616
Krupp's Steel-tired Car Wheels, 804
Lamp, Pintsch Car Platform, 314
Lamp, Waste Combination Tail, 818
Lancaster Car Coupler, 616
Lathe for Steel-tired Wheels, 130, 177, 786
Lathe, Sellers' Double Axle, 803
Lathe, Swing Engine, 452
Laufman Screw Brake, 34
Lawson Boiler, 637
Le Roux & Van Aarle Car Coupler, 616
Lidgerwood Engine, 178, 179
Links, Device for Slotting on a Slotting Machine, 483
Livesay's Pot Sleeper Permanent Way, 270
Locomotive, Compound Passenger, Webb's System,
539, 540, 531
Locomotive, Consolidation, Norfolk & Western, 306,
307, 308, 312
Locomotive Coupling Rod and Crank Pins, Ches-
apeake & Ohio, 226
Locomotive "Decapod," Baldwin Locomotive
Works, 271
Locomotive, English Tank, Details, 819
Locomotive Fire-box, Bulging of Sheets, 731
Locomotive Fire-brick Arch and Extended Smoke
Arch, 69
Locomotive Gauge Cock, Granger's Self-Cleaning,
227
Locomotive Indicator Diagrams, 2, 644, 645, 673
Locomotive, Mogul, New South Wales Railways, 194
Locomotive for New Zealand Railways, 723
Locomotive for Suburban Traffic, Great Eastern
Railway, England, 212, 215
Locomotive, Passenger, Glasgow & Southwestern
Railway, Scotland, 513, 514, 520
Locomotive, Passenger, New Zealand Railways, 723
Locomotive Performance at High Speed, Philadel-
phia & Reading, 673
Locomotive Pressure Gauge Mirror, 578
Locomotive Record Board, Peg for, 123
Locomotive, Cincinnati, New Orleans & Texas Pa-
cific, Indicator Diagrams from, 2
Locomotive Smoke-box and Stack, Improved, 436,
437
Locomotive, Soda Steam, 419
Locomotive, Tank, for New York & Brooklyn Bridge,
787
Locomotive Whistle, Chesapeake & Ohio Railroad,
354, 373
Locomotive Whistle, Single-bell Chime, 354, 373
London & Northwestern Compound Locomotive
"Dreadnought," 529, 530, 531
Lorenz, The Late William, 78
Malmindot Viaduct, 468
Mandrel, Expanding, for Facing Nuts, 277
Mansfield's Frogless Switch, 612
Marks Car Coupler, 616, 625
Master Car Builders' Association Proposed Standard
Wheel Flange, 370, 625
McKean Car Coupler, 616
McKean Car Coupler, 616, 626
Meadows & Mead Car Coupler, 616
Merrill, Late Sherburne S., 184
Michigan Central Standard Joint and Track, 275
Michigan Central Standard Road-bed, 145
Miles' Double Wheel Lathe for Turning Steel-tired
Wheels, 130
Milling Cutter Sharpening Machine, 537
Mexican Central, Spiral of the Barranca Blanca, 756
Metheany's Conductor's Check Memorandum, 739
Mexico, Population Chart of, 435
Morgan Car Coupler, 616
Muller Car Coupler, 616
Mundy's Bridge Erecting Hoisting Engine, 565
Murphy Car Coupler, 616
New Orleans Exhibition, Diagram of Steam Pipes,
155
Newton's Angle Fish-plate, 276
New York Central & Hudson River Cast-iron Sleeper,
561
New York Central & Hudson River Terminal Sta-
tions in New York, 61, 66, 66, 85
New York Lake Erie & Western Terminal Facilities
in New York, 592, 593
New York, Ontario & Western and New York, West
Shore & Buffalo Terminal Facilities in New York,
706, 707
New York, Pennsylvania & Ohio Standard Station
Platforms, 453
New York Terminal Facilities at, 51, 56, 66, 85, 130,
131, 132, 592, 593, 658, 659, 660, 706, 707
New Zealand Railways, Passenger Locomotive for,
723
Niles Tool Works, Lathe for Turning Steel-tired
Wheels, 127, 746
Norfolk & Western Consolidation Locomotive, 306,
307, 308, 312
Nut-locks, 19, 21
Olson's Cement Testing Machine, 389
Oregon Railway & Navigation Co. Car Transfer at
Portland, 498, 499
Palmer Torpedo Signal, 739
Payne Car Coupler, 616
Pennsylvania Railroad Standard Crossings and
Turnouts, 770
Pennsylvania Railroad Standard Guard Rail, 371,
532
Pennsylvania Railroad Standard Spikes, 771
Pennsylvania Railroad Terminal Stations and
Wharves, 120, 131, 132
Pennsylvania Steel Co., Magneto-Electric Crossing
Signals, 540
Permanent Way, Livesay's Pot Sleeper, 270
Perry Car Coupler, 616, 626
Phelps Induction Telegraph, 114, 115
Philadelphia, Chestnut Street Bridge, 68, 69
Pile Driver Car, 389
Pintsch Car Platform Lamp, 314
Pittsburgh, Cincinnati & St. Louis Standard Baggage
Car, 643, 645
Pittsburgh Junction Railroad, 84, 104, 105, 211, 216
Planer, Improved Iron, 18
Planimeters, Improved Forms of, 515
Planing Machine for Iron, English, 357
Planing and Matching Machine, Double, 195
Porter, H. K. & Co., Tank Locomotive for the Brook-
lyn Bridge, 787
Price's Frogless Switch, 594, 595
Profile, Condensed, for Railroads in Operation, 81
Pullman's Electric Bell Cord Coupling, 462
Rail Heads and Wheel Flanges, 197
Rail, Heaviest in America, 44
Rail Joint Diagrams, 72, 88, 98, 118, 212, 270, 710
Rail-joint, Fisher, 20
Rail-joint, Michigan Central, 275
Rail-joints, Broken, 146
Rail, Poor Steel, Specimen, 467
Railroad Stations, Plans for, 421
Rail, Creeping of, 5, 67
Rail-section, Light, 163
Rainfall Diagrams, 372
Richmond & Danville Standard Freight Truck, 228
Richie Brothers' Cement Testing Machine, 389
Road-bed, Standard, with Gravel Ballast, Michigan
Central, 148
Robson's Gas Hammer, 482
Rotary Steam Snow Shovel at Work, 258
Russell's Eccentric Car Coupler, 616
Russian Standard Box Car, 290, 291
St. John Bridge, 691, 692
St. Louis Bridge, Rail Fastenings, 5
Saxon State Railroad Standard Axle Box, 771
Sellers' Double Axle Lathe, 803
Sharp Flanges, 226
Signal, Magneto Electric Crossing, 500
Signal, Palmer Torpedo, 739
Signals, American Pneumatic, 93, 99
Signals and Switches, Interlocking, Grand Central
Depot, New York, 162, 163
Simpson Car Coupler, 616
Sleeper, Cast-iron, New York Central & Hudson
River, 561
Slide-valves, Apparatus for Ascertaining Friction
of, 339
Smith Car Coupler, 616
Snow Shovel, Rotary Steam, at Work, 258
Soda Steam Engine, 419
Spikes, Pennsylvania Railroad Standard, 771
Spirals, Railroad, 753, 755, 756, 757
Springfield Glue & Emery Wheel Tool Grinder, 227
Spring-plate Steel-tired Car Wheel, 260
Stand Pipe, Dodge Railroad, 467
Stanford Car Coupler, 616
Station Platforms, New York, Pennsylvania & Ohio
Standard, 453
Stations, Designs for, 421
Steam Excavator Diagrams, 820
Steam Excavator, Dunbar & Ruston's, 734, 735
Steam Shovel and Wrecking Car, 100
Steel Rail, Specimen Poor, 467
Steel, Price's Frogless, 594, 595
Steel Tired Car Wheels, Turning, 130, 177, 388, 786
Steel Tired Car Wheels, Krupp's, 804
Steel Tires, Worn, 753
Stress and Strain Diagrams, Unwin's Autographic,
708
Sukkur Bridge over the Indus, 805
Switch, German Frogless, 579
Switch, Mansfield's Frogless, 612
Switch, Price's Frogless, 594, 595
Tamping Machine, Railroad, 453
Tay Bridge, New, 772
Telegraph, Phelps Induction, 114, 115
Telephage, 722
Teredo, Action of on Wood, 339
Ticket holder, Ciller's, 148
Ties, Iron and Steel, 276, 364
Ties, Method of Indicating Age in Track, 517
Tilghson, Luther G., 115
Tire Blanks, 482
Tire Rolling Mill, 463
Tires, Worn Steel, 753
Titus & Hoisinger Car Coupler, 616, 629
Track, Standard, Michigan Central, 275
Trains, Great Eastern Railway, Comparative Dimen-
sions, 578
Trains, Watts' Combination Tail Lamp for, 818
Thurmond Car Coupler, 616, 627
Tool Grinder, Emery, Eberhardt's, 787
Topographical Chart of Tensile Strength of Bronzes,
5
Torpedo Signal, Palmer, 739
Truck, Proposed Standard Freight, 404, 405
Tunneling Caisson, Hall's Subaqueous, 244
Turnouts and Crossings, Pennsylvania Railroad
Standard, 770
Union Car Coupler, 616
United States Car Coupler, 616
Unwin's Autographic Stress and Strain Diagrams,
708
Valve, Delaney Balanced, 740, 741
Walsh, St. Louis & Pacific Fire-brick Arch and
Extended Smoke Arch, 620
Water Gauge, Improved, 292
Water-proof Joint for Iron Roofing, 338
Watts' Combination Tail Lamp, 818
Webb's System Compound Locomotive "Dread-
nought," 529, 530, 531
West Shore Fast Run, 548, 549
Wheel Flanges and Rail heads, 197
Wheels, Krupp's Steel-tired, 804
Whitman Car Coupler, 616
Williams Car Coupler, 616
Wood, Action of Teredo on, 339
Wood's Device for Turning Steel-tired Wheels
on their Axles, 388
Wood's Fast Feeding Flooring Machine, 466
Wrecking Derrick, English Self-propelling, 325
Wrecking Plant, English, 451

CONTRIBUTIONS.

- Accident, German Railroad, 17
 Accidents, Rear Collisions, Cost of, 5
 Alloy of Copper and Lead, 804
 American and English Steam Excavators, 741, 820
 Angle-bar, Early, 210
 Angle-bars, Breaking of, 146, 181, 436, 533, 565
 Angle Fish-plates, 161
 Angle Fish-plates, First Invention of, 180, 225, 276
 Balancing Revolving Weights on Locomotives, 721
 Ballast, Is It the Best?, 506
 Barnes Car Coupler, Buffalo, 691
 Billing Prepaid Shipments—Making Out Vouchers at
 Receiving Stations, 481
 Bloomington, Shop Notes at, 641
 Brakes, Freight Train, Announcement from Com-
 mittee on, 487
 Brake Tests, Proposed Freight Train, Criticism of,
 709
 Brakemen of the Present Day, 225
 Brakemen, Surly, 133
 Brakes, Efficiency of, 354
 Bridge, Chestnut Street, Foundation, 116
 Bridge, Chestnut Street, Philadelphia, Repairs to,
 65
 Bridge Construction, Question in, 742, 787
 Bridge, Devil's Gate Viaduct, 820
 Bridge, First Through Cantilever—Correction, 758
 Bridge Foundations, Defective, 323
 Buenos Ayres, Railroad in, 276, 466
 Car Axle Boxes, Expired Patents on, 310
 Car Check Chains, 157
 Car Check Chains, Useful and Useless, 162
 Car Coupler, Barnes, 691
 Car Coupler, Cowell Freight, 5
 Car Coupler, Marks, 691
 Car Coupler, McKen, 613
 Car Coupler Question, 435
 Car Coupler, Smilie, 623
 Car Coupler Tests at Buffalo, 576
 Car roofs, Freight, Proposed Safety Railing, 68
 Cars (Wagons), English Freighters, 546
 Cars, Hire of, 516
 Cars, Payment for the Use of, 431, 566
 Car Wheel, Axle and Tire Fastening, Standard Ger-
 man, 116
 Car Wheels and Axles, Forms of Bills for, 596, 676
 Car Wheels and Axles, Interchange Prices, 353, 481
 Car Wheels, Broken or Cracked on Foreign Roads,
 Responsibility for, 532
 Car Wheels, Broken—Wheel-maker's and Railroad's
 Responsibility for, 170
 Car Wheel Sharp, 296
 Central Pacific Railroad, 260, 370, 466
 Coal Premiums, French System, 323
 Copper and Lead, Alloy of, 804
 Coupon Tickets, Origin of, 690
 Cranks, Setting at Right Angles, 596
 Creeping of Rails, Irregular, 6, 67
 Culverts, Form of, 140, 211
 Culverts, Thickness of Abutments, Trautwine's
 Rule for, 245
 Curvature, Limit of Workable, 225
 Devil's Gate Viaduct—Correction, 820
 Douching, Late Peter H., 804
 Eccentrics, Setting on Crank Axles, 578
 Elastic Washers, 82
 Electric Railroad, Frankfurt-Offenbach, 399
 Elements of Railroad Engineering, 12
 Elements of Railroad Engineering—Movement of Freight, 28
 Elements of Railroad Engineering—Movement of Passengers,
 49
 Elements of Railroad Engineering—Construction,
 58
 Employees, Testing for Knowledge of and Obedience
 to Rules, 819
 English and American Steam Excavators, 741, 820
 English Freighters' Wagons, 546
 English Railroad Trains, 545
 Evaporating Performance, Norfolk and Western En-
 gine Tests, 323
 Excavators, Steam, English and American, 741, 820
 Fast Run, 676
 Fast Trains, Why We Have Few, 390
 Flanges, Two Sharp on One Axle, 391
 Frankfurt-Offenbach Railroad, 399
 Freight Car Roofs, Proposed Safety Railing for, 68
 Freight Train Brakes, Announcement from Commit-
 tee, 787
 Freight Train Brake Tests, Proposed, Criticism of,
 709
 French System of Coal Premiums, 323
 Fuel Consumption of Locomotives, 225, 625
 German Car Wheel, Axle and Tire Fastening Stand-
 ard, 116
 German Railroad Accident, 17
 Hart Foot Guard, Correction, 116
 Hoosac Tunnel, Disposition of, 282
 Interchange Prices of Wheels and Axles, 353, 481
 Interlocking Apparatus, Mr. Isham Randolph's
 Simple, 180
 Jarvis, Mr., and the Croton Aqueduct, 82
 Joints, Uneven Wear of, 82
 Journal Bearings, Anti-friction, 180
 Lead and Copper, Alloy of, 804
 Light Railroads, 210
 Light Rails, Experience With, 211, 547
 Light Rails and Narrow Gauge, 161
 Light Rails and Light Motions, Slotted, 482
 Locomotive Cranks, Setting at Right Angles, 566
 Locomotive Engines, Soda, 418
 Locomotive Eccentrics, Setting on Crank Axles, 578
 Locomotive Extension Smoke Arch and Fire-brick
 Arch in Fire-box, Proper Construction, 676
 Locomotive Fuel Consumption, 225, 625
 Locomotive "Oakland," Accident to, 197
 Locomotive Tests, Norfolk and Western, Evaporating
 Performance, 323
 Locomotives, Balancing Revolving Weights on, 723
 Locomotives "Decapod" and "El Gobernador," 244
 Locomotives, Rotary, 533
 Locomotive Smoke-boxes and Stacks, Improvements
 in, 436
 McKen Car Coupler—Explanatory, 613
 Marks Car Coupler—Explanatory, 691
 Massachusetts Overhead Bridge Law, 225
 Master Car-Builders' Proposed New Standard Wheel-
 tread, 549
 Master Car-Builders on Rail Sections and Flange-
 wear, 196, 275
 Michigan Central Standard Angle-bar and Track, 274
 Nebraska Cyclone, Effect of on Rolling Stock, 424
 New England Railroad Club, Annual Excursion, 565
 New York Central and Hudson River Terminal Facili-
 ties at New York, 50, 66
 New York, Lake Erie, and Western Terminal Facilities
 at New York, 502
 New York, Ontario and Western and New York, West
 Shore and Buffalo Terminal Facilities at New York,
 706
 New York, Railroad Terminal Facilities at, 50, 66,
 113, 130, 562, 657, 706
 Norfolk and Western Engine Tests, Evaporating Per-
 formance, 323
 Northernmost Railroad of the World, 50
 Nut-locks, Track bolts Without, 133
 Nuts on the In-ide of Rails, 505
 Ohio, Shop Notes in, 505, 613
 Oil and Tallow, Economy in the Use of, 116, 180, 221
 Operating Department and Railroad Management,
 709, 787, 805
 Owners, Shall They Be Protected?, 532
 Pennsylvania Railroad Terminal Facilities at New
 York, 113, 130, 562, 657, 706
 Philadelphia, Chestnut Street Bridge, Repairs to, 68
 Piece Work in Railroad Shops, 397, 436, 497, 516, 532,
 577
 Poor Steel Rails, 467, 516
 Quick Switching on the Denver and Rio Grande, 730
 Rail joints (Angle-bars), Breaking of, 147, 180, 370,
 436, 533
 Rail joints, Angle Fish-plates, 161, 180, 276
 Rail joints, Nuts on the Inside, 505
 Rail joints, Uneven Wear of, 82
 Rail joints, Why Do They Break?, 7, 406, 505
 Railroad Dispatch, 465
 Railroad Management and the Operating Depart-
 ment, 709, 787, 805
 Railroad Maps and Surveys, 145
 Railroads, Light, 210
 Railroad Shops, Piece Work in, 397, 436, 497, 516, 532,
 577
 Railroad Stations, Some Thoughts on, 420
 Railroad Surveys and Topography, 17, 89
 Railroad Terminal Facilities at New York, 50, 66,
 113, 130, 562, 657, 706
 Rail Sections and Flange-wear, Master Car-Builders
 on, 196, 275
 Rail Sections and Flange Wear—Two Sharp Flanges
 on One Axle, 391
 Rails, Light, Experience with, 211, 547
 Rails, Where Do They Break?, 7, 147
 Rail Sections, Standard, and Sharp Flanges, 339
 Rails, Light, 101, 211, 547
 Randolph's Simple Interlocking Apparatus, 180
 Real Estate Records of Railroad Corporations, 39
 Rear Collisions, Cost of, 5
 Remarkable Run on the West Shore, 449
 Retrenchment Papers, 246, 261, 276, 291, 308, 340, 353
 Rock Ballast, Is It the Best?, 506
 Rotary Locomotives, 533
 Rules, Testing Employees' Knowledge of and Obedi-
 ence to, 819
 Sharp Flanges and Standard Rail Sections, 339
 Sharp Flanges, Two on One Axle, 391
 Signals, Torpedo, 82
 Smilie Car Coupler, 623
 Snow and Snow-plows, 353
 Soda Locomotive Engines, 418
 Sparks, Manufacture of, 690
 Splice-bars, Breaking of, 370
 Springfield, Ill., Shop Notes, 675
 Station Platforms, Cost of, 466
 Stations, Some Thoughts on, 420
 Steam Excavators, American and English, 741
 Steel Rails, Poor, 467, 516
 Steel Rails, Tests of, 545
 Tests of Steel Rails, 545
 Through Freight, How Can It Be Made Profitable?,
 276
 Tickets, Coupon, Origin of, 690
 Ties, Method of Indicating the Age of, 518
 Torpedo signals, 82
 Track-bolts Without Nut-locks, 133
 Track Inspection, Mysteries of, 805
 Track Problems, 641
 Track, Standard, Michigan Central, 274
 Trainsmen, Protection of, 180
 Trautwine's Rule for Thickness of Abutments of
 Arches for Bridges and Culverts, 245
 Wadell's Highway Bridges—Correction, 421
 Watson, Late Peter H., 804
 West Shore, Remarkable Run on, 449
 Wheels and Axles, Form of Bills for, 596, 676
 Wheel Tread, Proposed New Standard, 449
 Whitney, Late George, on Wheel-maker's and Rail-
 road's Responsibility for Broken Wheels, 179
 Widening Gauge on Turnout Opposite Foot, 180

EDITORIALS.

- Accident, Remarkable, 326
 Accident, Three Collisions, 690
 Accidents, April, 347
 Accidents, August, 617
 Accidents, December, 75
 Accidents, February, 218
 Accidents, January, 138
 Accidents, July, 552
 Accidents, June, 473
 Accidents, March, 299
 Accidents, May, 410
 Accidents, November, 10
 Accidents, October, 792
 Accidents, September, 608
 Accidents, Year 1884, 103
 American Locomotives at International Exhibitions,
 250
 American Society of Civil Engineers, Annual Meet-
 ing, 74, 424
 Anthracite Coal Mines, Growth of Capacity and Pro-
 duction, 346
 Bad Rails, Cause and Cure for, 518
 Bad Wheels and Bad Wheel Makers, 890, 975
 Ballast Trains and Steam Excavators, 8, 4
 Baltimore and Ohio's New York Line, 760
 Bankrupt Railroads, Final Disposition of, 261
 Boston & Albany, 7, 6
 Brake Tests, Proposed Freight, 713, 791
 Brake Shoes, Rejected Standard, 696
 Brakes, Calculation of the Efficiency of, 312
 Brakes, Maximum Efficiency of, 326, 345
 British Rail Exports, 120
 Broken Joints, Argument for, 72, 88
 Broken Joints, Oscillation from, 118
 Boilers, Deterioration of, 713, 731
 Boston Discussion of Steel-tired Wheels—Correction,
 716
 Bronzes, Strength of, 504
 Buffalo Coal Roads, 281
 Buffalo Lake Traffic, 40
 Canada, Railroads of, 279
 Canadian Pacific and the St. Paul, Minneapolis &
 Manitoba, 600
 Car Check Chains, Useful and Useless, 136
 Car Coupler H-locust, 538, 615
 Car Couplers, Passenger and Freight, 630
 Car Coupler Tests at Buffalo, 598
 Car Coupler Tests, Results of, 616
 Car Couplings, Tight, European and American, 456
 Car Heater Explosions, 106
 Car Seats, Arrangement of, for Urban and Subur-
 ban Travel, 575
 Cars, Freight, End Platforms for, 680
 Car, Sleeping, Accommodations, 459
 Car Trucks, 651
 Car Wheels and Axles, New Interchange Prices for,
 455
 Car Wheels, Boston Discussion, 746
 Car Wheels, Cheap, 365
 Car Wheel Tread, Rejected, 631
 Ceylon Railways and a Few Others, 551
 Chicago & Alton, 157
 Chicago, Burlington & Quincy Earnings, 27, 137,
 171, 232, 298, 377, 440, 504, 534, 651, 731, 792
 Chicago Live Stock Receipts, 651
 Chicago Meeting, 251
 Chicago, Milwaukee & St. Paul, 105, 184
 Chicago, Milwaukee & St. Paul, New Issue of Stock,
 631
 Chicago & Northwestern Report, 487
 Chicago Railroads, Growth of Passenger Earnings,
 392
 Chicago Railroads, Course of Earnings of, 230
 Chicago Receipts of Grain and Live Stock, 35
 Chicago Receipts and Railroad Mileage, Progress of,
 664
 Chicago Shipments, 58, 106, 328
 Chicago Through Shipments Eastward, 170, 234
 China and Japan, Railroads in, 519
 Cholera and the Railroads, 249
 Civil Engineers' Convention, 524
 Coal Consumption per Mile on English and Ameri-
 can Railroads, 586
 Coal Premiums on the Pennsylvania Railroad, 250
 Coal Roads, Buffalo, 281
 Consulting Shareholders, 375
 Cotton Crop Movement, 648
 Cotton Exports, 472
 Corn Movement and the Earnings of the Chicago
 Railroads, 55
 Couplings, Tight and Loose, Mechanical Difference
 Between, 344
 Couplings, Tight versus Slack, 296
 Creeping of Rails, 10
 Crops, 470
 Crops of 1885, 666
 Crop Prospects, 361
 Cross ties, 326
 Crossing the Track, 8
 Culverts, 54
 Curves, Multiple Tracks on, and Sags in Grade
 Lines, 329
 Curves, Widening Gauge on, 185
 Deterioration of Boilers, 713, 731
 Dynamometer and Train Resistances, Government
 Railroads of Saxony, 281
 Earnings, April, 236, 315, 380
 Earnings, August, 533, 649
 Earnings, Chicago Railroads and the Corn Move-
 ment, 55
 Earnings, December, 28, 39, 90
 Earnings, February, 170, 217
 Earnings, January, 106
 Earnings, July, 162, 283
 Earnings, June, 439, 457, 502
 Earnings, March, 248
 Earnings, May, 425
 Earnings, Net, in 1884, 249
 Earnings, November, 35, 709, 808
 Earnings, October, 728
 Earnings, September, 640, 728
 Earnings, the Chicago Railroads, Course of, 230
 Earnings, Recent, 712
 Fast-bound Freight Cars in 1884 and 1885, 75
 Elevated Railroads, Longer Trains on, 632
 Electric Propulsion for the New York Elevated Rail-
 roads, 46
 Employees, Railroad, Engagement and Management
 of, 216
 End Platforms for Freight Cars, 680
 Engineering Works, Their Importance, 687
 Erie Earnings and Expenses, 41, 105, 233, 298, 377,
 440, 504, 541, 651
 Erie Report, 709, 771
 European and American Tight Couplings, 456
 Excavators, Steam, and Ballast Trains, 821
 Exports and Imports, National, 519
 Exports, Large Grain and Provision, 216
 Fairlie, Late Robert F., 536
 Farm Products, Prices of, and Cost of Transporta-
 tion, 88
 Fast Trains, English and American, 500
 Fort Wayne Dispatch, Important, 687
 Forty Years of Maintenance of Way, 807
 France, Rates and Cost of Transportation in, 153
 Freight Brake Tests, Proposed, 713, 791
 Freight Train, Long, 592
 Freight Transportation, Cost of, in England and the
 United States, 278
 French Railroads, Employment of Women on, 329
 Fuel Consumption, Effect of Speed on, 583
 Gauge, Widening on Curves, 185
 German Compound Locomotives, 529
 Germany, Principles of Rate-making in, 119
 Government Land Entries in Dakota, Minnesota
 and Wisconsin, 185
 Government Lands, Disposal of, 711
 Grade Lines, Sags in, and Multiple Tracks on Curves,
 329
 Gr in Exports, Course of, 470
 Grain Exports of the United States, 58, 762
 Grain Movement, 761
 Grain Movement, Effect of, 369
 Grain Movement, August, 297
 Grain Movement, Recent, 297
 Grain Movement, Winter, 408
 Grain Rates for Twenty Years, 24
 Grain Receipts of Eastern Ports, 73
 Grain Receipts, New York, 440, 503, 584
 Grain Shipments, Lake and Rail, 690
 Grand Trunk in the First Half of 1885, 601
 Grand Trunk, Position as to Pools, 314
 Grand Trunk Rep rt, 249
 Houston & Texas Central, 57
 Immigration, Recent Course of, 227
 Imperceptible Slip in Locomotives, 568
 Imports and Exports, National, 519
 Interchange Prices, New, for Wheels and Axles, 455
 Interlocking, 745
 Inventions Exhibition, International, 553
 Iowa Railroad Commission Report, 91
 Iron Cabs, 533
 Iron Market, Present Tendency of the, 607
 Japan and China, Railroads in, 519
 Jarvis, Late John E., 40
 Lake Shore and the Michigan Central, 8, 424
 Lake Shore Quarterly Report, 344
 Lake Shore Report, 185, 292
 Lands, Government, Disposal of, 711
 Legislation for the Protection of Railroad Interests,
 248
 Light Railroads, 200
 Light Rails, 168
 Live Stock and Traffic, 278
 Locomotive Cabs, Iron, 533
 Locomotive "Decapod," 185, 292
 Locomotives, American, at International Exhibi-
 tions, 250
 Locomotive, Compound, History of, 553
 Locomotives, German Compound, 529
 Locomotives, Imperceptible Slip in, 568
 Long Freight Train, 793
 Lumber Production and Lake Superior Traffic, 169
 Maintenance of Way, Forty Years of, 807
 Massachusetts Railroads in 1883-84, 74
 Massachusetts, Regulating Rates in, 420
 Master Car-builders' Convention, 392
 Master Mechanics' Convention, 408
 Mechanical Difference Between Tight and Loose
 Couplings, 344
 Merchandise Movement to the West, 730
 Metals and Coal, Past Prices of, 683
 Mexican Locomotives, 529
 Mexican Railway, Last Half-year, 410
 Michigan Central and the Lake Shore, 8, 424
 Michigan Central Report, 396
 New Jersey, Railroad Taxation in, 393
 New York Central Quarterly Report, 314
 New York Central and the West Shore, 486
 New York Central's Last Fiscal Year, 807
 New York, Chicago & St. Louis (Nickel Plate), 376
 New York City Travel, Growth of, 121
 New York Grain Receipts, 440, 503, 514
 New York, Lake Erie & Western, 760, 774
 New York Railroad Commissioners' Recommenda-
 tions, 55
 New York Railroad Commissioners' Report, 34
 Nickel-Plate Bondholders, 376
 Northern Pacific Report, 617
 Nut-locks in Use, 39
 Oregon Railway & Navigation Co., Proposed Lease,
 298
 Oscillation from Broken Joints, 118
 Pacific Railway's Debt to the Government, 91
 Pack ng Season, Summer, 825
 Passenger Brakemen, 120
 Passenger Earnings of Chicago Railroads, Growth
 of, 392
 Passenger Rates, Trunk Line, 825
 Patent Office Report, Last, 604
 Pennsylvania Railroad Coal Premiums, 250
 Pennsylvania Railroad Earnings and Expenses, 11,
 73, 232, 298, 377, 440, 504, 534, 651, 731, 792
 Pennsylvania Railroad Report, 152
 Piece Work in Railroad Shops, 392
 Pools, Grand Trunk's Position, 314
 Poor's Manual, New, 536
 Poor Steel Rails, 471
 Prices of Metals and Coal, 683
 Provision of Exports, 449
 Rail joints, Argument for Broken, 72, 88
 Rail joints, Broken, Oscillation from, 118
 Rail joints, Why Do They Break?, 710
 Railroad Interests, Legislation for the Protection of,
 248
 Railroad Prospects, 451
 Railroads and the Cholera, 249
 Railroad Securities and Mr. Vanderbilt's Will, 806
 Railroad Supply Trade, 604
 Railroad Surveys and Topography, 154
 Rails, Bad, Cause and Cure for, 518
 Rails, Light, 108
 Rails, Poor Steel, 471, 489
 Rails and Track Labor, 438
 Rate-making, Principles of, in Germany, 119
 Rates and Cost of Transportation in France, 153
 Rates, East-bound, in 1889 and 1884, 75
 Rates, Effect of, on Trunk Line Shipments West-
 ward, 534
 Rates, Effort to Maintain, by the Trunk Lines' West-
 ern Connections, 232
 Rates, Reasonable, to Producers and Carriers, 91
 Rates, Regulating, in Massachusetts, 420
 Rates, Through Trunk Line, Prospects for, 119
 Rates, Trunk Line Passenger, 825
 Rates, Trunk Line, Restoration of, 616
 Rates, West-bound, Reduction of, 73
 Rear Collisions, Cost of, 5
 Record of New Railroad Construction, 11, 28, 42, 58,
 76, 137, 167, 182, 189, 195, 172, 186, 219, 234, 251, 267,
 282, 299, 318, 329, 347, 365, 377, 384, 411, 427, 440,
 457, 473, 490, 506, 521, 537, 554, 571, 587, 602, 618,
 633, 652, 684, 700, 714, 732, 746, 763, 778, 793, 810, 820
 Rules, Union Pacific's New Code, 41
 Sauter, Late James H., 393
 St. Paul, Minneapolis & Manitoba, 614
 St. Paul, Minneapolis & Manitoba and the Canadian
 Pacific, 600
 Shareholders, Consulting, 375
 Signals, Interlocking, 745
 Sleeping Car Accommodations, 409
 South Pennsylvania, 489
 Speed, Effect of, on Fuel Consumption, 583
 Speed, Extraordinary, on the West Shore, 456
 Steam Excavators and Ballast Trains, 824
 Steel Rails, Poor, 471
 Steel Rails, Poor, Chemical Composition of, 486
 Steel-tired Wheels, Boston Discussion, 746
 Steel, Wearing Qualities of, 290
 Summer Packing Season, 825
 Taxation, Railroad, in New Jersey, 393
 Three Collisions, 680
 Through Trunk Line Freight, Profits on, 217
 Tight Couplings, European and American, 456
 Tight versus Slack Couplings, 296
 Topography, Use and Abuse of, 24
 Track Inspection and Premiums, 790
 Track Labor and Rails, 438
 Track Maintenance as affected by Traffic, 775
 Traffic as affected by Track Maintenance, 775
 Traffic Statistics, 825
 Train Accidents in 1884, 103
 Train and Dynamometer Resistances, Government
 Railroads of Saxony, 281
 Train, Long Freight, 792
 Train Rules and Train Movement, 425
 Train Rules, Uniform, 568
 Transportation, Cost of, and Prices of Farm Prod-
 ucts, 88
 Trunk Line Combination, 89
 Trunk Line Passenger Rates, 825
 Trunk Line Pool, Preparations for, 697
 Trunk Line Pools, 260
 Through Trunk Line Rates, Prospects for, 119
 Trunk Line Contract, New, 744
 Trunk Lines, Rumors Concerning, 636
 Trunk Line Shipments Westward, Effect of Rates
 on, 534
 Trunk Line Rates, Restoration of, 616
 Trunk Line Shipments, West-bound, 535
 Trunk Line Traffic Statistics, 574
 Trunk Line Western Connections, Effort to Main-
 tain Rates, 232
 Twenty-four Hours Make a Day, 9
 Union Pacific's New Code of Rules, 41
 United States Railroads in 1884, 550
 Useful and Useless Check Chains, 136
 Vanderbilt, Late Wm. H., 790
 Vanderbilt's Will and Railroad Securities, 806
 Wash System, 295
 West-bound Freight Movement, 616
 West-bound Rates, Reduction of, 73
 West Shore, Extraordinary Speed on, 456
 West Shore and the New York Central, 486
 West Shore Report, 0
 Wheat Crop, Movement of the New, 519
 Wheat Production, American, 102
 Wheels and Wheel Makers, Bad, 590, 975
 Whistling, 588
 Whitney, Late George, 186
 Why Do Rail Joints Break?, 710
 Winter Grain Movement, 408
 Women, Employment of, on Two French Railroads,
 329
 Year, The, 822

EDITORIAL NOTES.

- Accident, Austell, 825
 Accident, Bridge, New York, Ontario & Western,
 121
 Accident, New Brunswick Collision, 104
 Accidents in Great Britain, 411, 753
 Accidents, Run-over, in Yards, 121
 Accidents to Special Trains, 700
 Accidents, Two, on Old Colony, 394
 Advertising, Co-operative Railroad, 631
 Air and Buffer Brakes for Freight Trains, 778
 Alabama Railroad Commission, 644
 Aluminum, 538
 Angle-bars, Fracture of, 316
 Anthracite Coal Production, 267
 Association of American Railroad Superintendents,
 632
 Atlantic Wheat Receipts, 777
 Austria, New Railroads in, 362
 Austrian State Railroads, Industrial Map, 186
 Austrian Railroads, Cost of Transportation, 186
 Austria, Railroad Statistics in, 763
 Austria, Wheat Traffic in, 763
 Baltimore & Ohio and Erie, 768
 Baltimore & Ohio and Passenger Rates, 776
 Baltimore & Ohio and the Pennsylvania, 631
 Baltimore & Ohio in Philadelphia, 410
 Baltimore & Ohio Report, 745
 Reef, Price of, 58
 Belgium, Fiftieth Anniversary of Railroads in, 472
 Belgium, Railroad Jubilee in, 902
 Benchmarks, 85
 Bessemer Steel Production, 155
 Blast Furnaces of the United States, 608
 Bolts, Sizes of, 746
 Boston Elevated Railroad, 41, 810
 Boston & Lowell, 154
 Bowen, E. S., 633
 Braked Wheels Skidding, 490
 Brakemen, Number of, on Freight Trains, 714
 Brakes for Freight Service, Buffer and Air, 778
 Brakes, Master Car-Builders' Association Proposed
 Tests, 698
 Breadstuffs, Exports of, 570, 690
 Bridge, North, Hydraulic Spade at Works, 651
 Bridge, Chestnut Street, Foundations, 172
 Bridge Inspection on New Jersey Central Railroad,
 775
 Bridges, Examination of, by New York Railroad
 Commission, 55
 Bridges, Safety Guards at, 121
 Bridges, Shaler Smith's Collision Strut for, 798
 Brooklyn Bridge, Coal Consumption, 133
 Buffalo Grain Traffic, 618
 California Wheat Rates, 609
 Canadian Pacific Wheat Rates, 809
 Canal, Lake and Ocean Rates, 315, 347
 Canal Traffic from Buffalo, 11
 Car Coupler, Ames, 138, 721
 Car Coupler Map, Janney, 172
 Car Coupler, Perry, 651
 Car Couplers, Massachusetts Commission on, 411
 Cars, Detention to Freight, in New England, 10
 Cars, Dining, in England, 262
 Cars, Freight, Increase of Capacity, 632
 Car Truck, Master Car-Builders' Standard, 536
 Car Wheel and Axle, German, 140
 Wheels and Axles, Interchange Prices of, 450
 Car Wheels, Bad, and Sharp Flanges, 537
 Car Wheels, Large and Small, 660
 Central Massachusetts, 267, 316
 Central Passenger Association, 281
 Central Railroad of New Jersey, 410
 Central Railroad of New Jersey, Bridge Inspection,
 778
 Central Traffic Association, 231, 323, 346
 Chicago, Burlington & Quincy, 154, 232, 251, 521,
 602, 608, 810
 Chicago-Council Bluffs Settlement, 338
 Chicago East-bound Pool, 74
 Chicago Grain Receipts, 306
 Chicago & Grand Trunk, 185
 Chicago Live Stock and Dressed Beef Shipments,
 777
 Chicago Lumber Traffic, 377

EDITORIAL NOTES.

Chicago Meeting, Mr. Ingall's Speech, 249
Chicago & Northwestern, 139
Chicago Produce Receipts, 28
Chicago Railroads, Passenger Earnings, 330
Chicago, Rock Island & Pacific, 329
Chicago Shipments, Actual and Reported, 740
Chicago Traffic Award, 26, 76
Chicago Through Shipments Eastward, 11, 28, 42, 56, 58, 76, 92, 127, 138, 155, 171, 186, 202, 219, 233, 251, 267, 282, 299, 315, 329, 347, 362, 377, 394, 426, 427, 441, 457, 473, 490, 505, 520, 535, 550, 553, 570, 584, 590, 601, 618, 633, 651, 668, 683, 699, 713, 731, 748, 763, 777, 793, 808, 826
Chicago Wool Traffic, 27
China, Railroads in, 191, 667
China, Coal in, 651
China, Railroads in, 618
Civil Engineers in Government Service, 793
Cleveland, Columbus, Cincinnati & Indianapolis, 180
Coal Consumption of Steamers, 97
Color Blindness, Examination for, 283
Connoton Valley, Change of Gauge, 330
Controlled Companies, Contracts with, 792
Corn Crop, 28, 92, 121
Corn Movement, Northwestern, 76, 121, 361, 577, 426, 570, 587, 602, 618, 651
Cotton Crop, 809
Cotton Exports, 746
Crops in Great Britain, 699
Culverts, Dimensions of, 106
Daft Electric Motor, 777
Depeu, Chaucery M., 333
Depot or Station, 27, 74, 746
Directors as Purchasers of Bonds below Par, 377
Discrimination in Rates, Ohio Decision, 308
Disinfecting Cars and Stations, 473
Dividends, Fluctuations, in France, 27
Dressed Beef Traffic, 10
Duluth as a Wheat Market, 731, 809
Earnings, April, 329
Earnings, August, 609, 618, 632
Earnings, December, 319
Earnings, January, 121
Earnings, July, 503, 520, 536, 553, 569
Earnings, June, 472, 488
Earnings, March, 238, 257, 281, 537
Earnings, May, 377
Earnings, October, 745, 761, 792
Earthquakes, 330
East-bound Freight Pool, 39, 56
East-bound Rates, 172, 218, 426, 440, 457, 777
Eastern Roads, Number of Brakemen on Freight Trains, 714
East Tennessee, Virginia & Georgia Gospel Train, 394
Electric Motor, Daft, 777
Elevated Railroads in Boston, 41, 810
Emigrant Rates, 56
Employees, Injuries to, in Iowa, 93
Employees, Old, Liability to Make Mistakes, 394
Engineers, Young, Best Place for, 714
England, Demand for Railroad Material in, 93
England, Dining Cars in, 205
English Engineering Work, Extraordinary, 700
Erie and the Baltimore & Ohio, 702
Erie Canal, 457
Erie Limited Express, 457
Erie Officers from the West, 11
Expenses and Earnings, 377
Fast Trains in England and America, 282, 602
Fast Time on the Erie, 609
Flood Rock, Removing, Bids for, 699
Forney, Mr. M. N., and the Master Car-Builders' Association, 396
France, Light Railroads in, 587
Franklin Institute Lectures, 714
Franklin Institute Novelties Exhibition, 233
Freight Rates, East-bound, 26, 172, 218, 440, 457, 733, 777
Freight Rates, West-bound, 376, 730
Freights, East-bound, Chesapeake & Ohio Competition, 20
Freight Steamers, Fuel Consumption of, 76
Freight Trains, Buffer Brakes for, 778

Freight Trains, Slack in, 714
Friction, 202
Gauge, Five-foot, 436
Georgia Railroad Law, 667
German Car Wheel and Axle, 120
German Passenger Fares, Proposed, 714
German Universities, Lectures on Railroads in, 714
Grade Crossing Slope in Massachusetts, 163
Grand Trunk Railway, 42
Grain, Diversion of, from Chicago to St. Louis, 42
Grain Exports, Atlantic Ports, 42, 138
Grain Exports from Russia, 781
Grain Exports by Steam and Sail, 62
Grain Fleet Wintering at Chicago, 708
Grain Lake Shipments of, 770
Grain Movement, 104, 135, 362, 376, 377, 472, 618
Grain Receipts at Chicago, 364
Grain Receipts at New York, 27, 30, 218, 297, 617, 697, 746, 820
Grain Receipts, Northwestern, 76, 172, 602, 618, 699, 725, 809
Grain Shipments Eastward, 249, 618, 633, 699, 713
Grain Shipments, Rail, Lake and Canal, 552, 570, 602
Grain, Visible Supply, 439
Great Britain, Block Signals in, 289
Great Britain, Crops in, 699
Hadley's "Railroad Transportation," 714
Hannibal & St. Joseph, 684
Highland Junction, 267
Hog packing in the Northwest, 58, 457, 600, 810
Hog Products, 121, 302, 570, 600
Houstonian Railroad Rates, 714
Houtat, n. & Texas, 57, 74
Hudson's Bay Route, 554
Hydraulic Spade at the North Bridge Works, 651
Illinois Central, 92, 137
Immigration, 121, 249, 488, 490, 714
India, Wheat in, 381
Injector, Use of in Feeding Boilers at High Speed, 682
Injunctions as Balances on Railroad Property, 792
International Inventions Exhibition, 27, 219
Inter-state Commerce Bill, 39, 56
Iron Cabs for Locomotives, 634
Iron Ore from Lake Superior to Bethlehem, 793
Iron Ore, Rates on, in England and Europe, 282
Iron, Pig, United States Production, 41, 328
Janney Car-Coupler Map, 172
Johnston, Gen. Joseph E., 219
Joint Executive Committee Meeting, 457
Kirkman, Marshall M., 553
Lake, Canal and Ocean Rates, 315, 347
Lake Erie & Western, 282
Lake Erie and Western, 315
Lake Shipments of Grain, 776
Lake Shore & Michigan Southern, 761
Lake Superior Grain Business, 601
Lake Superior Traffic, 602
Lands, Railroad, Taxes on, 792
Liverpool-Manchester Canal and Railroad Rates, 793
Live Stock and Dressed Meat Traffic, 777
Locomotive Boilers, Openings in, and Accidents, 682
Locomotive Boilers, Use of Injector for Feeding, 682
Locomotive Cabs, Iron, 634
Locomotive Driving Wheel Breakage, 93
Locomotive Engineers and Examinations for Color Blindness, 282
Locomotives, Heavy Passenger for Midland Railway of England, 106
Locomotives, Pumps and Injectors, Stopped by Vacuum in Tank, 172
Locomotive Rims, Lengthening, 536
Locomotives, Air Pumps for, 634
Locomotives, Cabs, Iron, 634
Locomotives in Switching Service, 609
Locomotive, Webb's Compound, 219
London, Brighton & South Coast Train Stoppages, 234
London Freight Delivery Wagons, 587
Louisiana Western, 233
Lumber, Better Demand for, 651
Lumber Manufacture at Minneapolis, 826
Lumber on the Northern Pacific, 699

Lumber Rates, 667
Lumber Shipments, Saginaw, 441
Lumber Traffic at Chicago, 634
Maleicure, Emil, 571
Manhattan Elevated, 667, 731
Marquette, Houghton & Ontonagon, 242, 363
Master Car-Builders' Association and Mr. Forney, 396
Master Car-Builders' Standards, 361
Massachusetts Commission on Car Coupler Accidents, 411
Massachusetts Commission and Railroad Rates, 569, 714
Massachusetts Legislature, Railroad Matters in, 164
Massachusetts, Right to Build Railroads in, 569
McClellan, Late Gen. George B., 713
Mexican Freight Routes, 601
Mexican National, 219
Michigan Railroad Commissioner, 667
Miller Draw Bars, Standard Height of, 714
Minneapolis Saw Mills, 826
Mobile & Ohio, 633
Mobile & Ohio Change of Gauge, 426
Narrow Gauge, 330
National Museum, Railroads in, 411
New York, Arrival of Vessels at, 42
New York Central Receipts, 26
New York Central & Hudson River, 104, 171, 590, 633
New York Central Passenger Traffic, 395
New York Central and Pennsylvania Negotiations, 457, 472
New York Central—West Shore Injunction, 792
New York, Chicago & St. Louis, 186, 218, 314
New York Elevated Roads, Capacity, 731
New York Grain Receipts, 27, 30, 218, 297, 617, 698, 746, 820
New York, Lake Erie & Western, 155, 792
New York, New Haven & Hartford, 11
New York, Pennsylvania & Ohio Condensed Profiles, 608
New York Railroad Commission Examination of Bridges, 503
New York Terminal Facilities, 609
New York West-bound Pool, 376, 426
New York West-bound Shipments, 40, 104, 171, 201, 206, 328, 488, 584, 632, 650, 682, 699, 746, 777
New York, West Shore & Buffalo, 218, 281, 297, 330, 457
Northern Central, 232, 633
Northern Pacific Lumber Movement, 699
North-locks, 58
Oceano, Lake and Canal Rates, 315, 347
Ohio Supreme Court on Discrimination in Rates, 808
Oregon & California, 683
Panama Canal, 506
Paris-St. Petersburg Fast Train, 219
Passenger Fares, Proposed, 714
Passenger Rates and the Baltimore & Ohio, 776
Passenger Rates, East-bound, 27, 346
Passenger R. t. e., Pennsylvania, 316
Pennsylvania and the Baltimore & Ohio, 681
Pennsylvania and New York Central Negotiations, 457, 472
Pennsylvania Railroad Circular on Disinfection, 473
Pennsylvania Railroad Dividends, 171, 712
Pennsylvania Railroad Earnings and Expenses, 139
Pennsylvania Railroad Passenger Rates, 346
Petroleum Movement, 457
Philadelphia & Reading, 350
Piece Work in Maintenance of Way, 573
Pig-Iron Production in the United States, 41, 328
Planimeters, Some New Forms, 553
Pneumatic Postal Service, 394
Poor's Manual, 583
Portable Railroad at Eberswald Forestry School, 394
Provision Exports, 76, 608, 763
Railman C. H. Goodrich, 394
Rail Exports, British, 282, 441, 473
Rail joints, Angle-bar, Breakage of, 233, 316
Railroad Lectures in German Universities, 714
Railroad Officers Going into Private Business, 731
Railroad Transportation, Its History and Laws, 714

Rails, American vs. Double-head in Australia, 106
Rails, Machine for Taking Shape of, 92
Rates, Pieces of, 28
Rates, Discrimination in, Ohio Decision, 308
Rates, East-bound, 26, 172, 218, 426, 440, 457, 568, 730, 777
Rates on Iron Ore, English, 282
Rates, West-bound, 246, 576, 699
Reagan Bill, The, 34, 56
Rear Collision at New Brunswick, 104
Red Flag, Size of, 154
Red Paint on the Baltimore & Ohio, 488
Road Crossing Gates, 503
Rochester & Pittsburgh Decision, 377
Russia, Grain Exports from, 793
Russian Petroleum, 93
Ship-Building in Great Britain, 105
Signals, Block and Interlocking, in Great Britain, 382
Signals, Block System, 172
Signals, Interlocking, on Chicago & Western Indiana, 106
Slack in Freight Trains, 714
Sleeping Car Contracts, 792
Smith, C. Shaler, Collision Strut for Bridges, 793
Sonora Railway, 684
South America, First Transcontinental Railroad, 826
South Africa, Railroad Extension in, 835
Southern Pacific Company, 219, 297
South Pennsylvania Railroad, 57, 282
South Penn Transit, "Obituary Number, 731
Speed of Trains, Estimating by Counting Revolutions of Drivers, 669
Station Agents' Association on the Boston & Albany, 394
Station or Depot? 712, 746
Stay-bolt Iron, Tests of, 315
Steel, Bessemer, Production of, 155
Steel Rails in Belgium, 155
Swankin-Berber Railroad Contract, 233
Taxes on Railroad Lands, 792
Texas & New Orleans, 233
Threads for Bolts, Sizes of, 746
Through and Local Traffic, Michigan Railroad Commissioners' Rule, 667
Track Spreading, Causes of, 554
Track Work by Piece Work, 570
Train Register Book, Imperfect in, 457
Trains at the Grand Central Depot, New York, 609
Transcontinental Rates, 301, 219
Traveling Passenger Agents' Association, 793
Troy & Greenfield, 381
Trunk Line Agreement, 730
Trunk Line, East-bound Shipments, 633
Trunk Line Executive Committee, 639
Trunk Line Freight, Value of, 637
Trunk Line Presidents' Meeting, 104, 297, 346, 632, 650, 730
Trunk Line Rates, 346, 603
Union Pacific, 505, 601, 793
Union Pacific Land Sales, 651
Union Switch & Signal Co., 605
Wabash Litigation, 201
Wadley, James, 416
Watkins, C. E., 411
West-bound Freight Rates, 376
West Shore Fast Time, 537
Wheat in Austria, Hungary, 763
Wheat at Duluth, 231, 809
Wheat in India, 22, 155, 731
Wheat in Russia, California, 699
Wheat Rates, Canadian, Pacific, 799
Wheat Receipts, Atlantic, 28, 91, 777
Wheat Receipts, Northwestern, 11, 91, 490, 598, 653, 570, 587, 635, 651, 669, 683, 699
Wheels and Axles, Interchange Prices of, 700
Wilder, F. M., 731
Winter Packing Season, 777
Working Expenses, Proportion of, to Earnings, 377
Workmen and Strikes, 233
Young Engineers, Best Place for, 714

NEW PUBLICATIONS.

Adams & Price, Bolt and Nut Machinery, 473
American Brake Company, Catalogue, 220
American Engineering Register, 554
American Institute of Mining Engineers, Transactions, 187
American Society of Mechanical Engineers, Transactions, 330, 793
American Street Railway Association, Report of Third Annual Meeting, 172
Architects' and Builders' Pocket Book, 348
Balance Slide Valve, 139
Baldwin's Official Railroad Guide, 810
Bender's Principles of Economy in the Design of Metallic Bridges, 618
Bentley-Knight Electric Railway Co., 571
Beton Coignet and St. Gobain's System of Constructing and Repairing Railroad and Other Structures, 537
Brakes, Eames Vacuum, 669
Bridge Designs, Phoenix Bridge Co., 208
Bridges, Designing Ordinary Highway, 234
Bridges, Economy in the Design of, 618
Bridges, System of Iron, for Japan, 634
Bolt and Nut Threading and Pointing Machinery, 138
Boston & Lowell, Summer Sinterings, 394
Box on Strength of Materials, 11
Burlington, Cedar Rapids & Northern, Spirit Lake, 367
Car and Chair Seats, 746
Car, Postal, United States Standard Trimmings, 669
Car Wheels, Turning Steel-tired, 763
Cars, Wrought Iron on, 609
Chicago, Milwaukee & St. Paul, Summer Tourist's Wonder Land, 563
Chicago to San Francisco, 490
Civil Engineers' Pocket Book, 362
Clayton Air Compressors, Rock Drills and Mining Machinery, 490
Coal Trade for 1885, 203
Contractors' Plant Manufacturing Co., 363
Curve Tracing in Cartesian Co-ordinates, 139
Dynamo-Electric Machinery, 28
Eames Vacuum Brake Co., Catalogue, 669
Eddy Valve Company, Price-List, 234
Electric Railway Co., Bentley-Knight, 571

Engineering, Materials of, 316
Engineering Structures for Railroads and Highways, Select Plans for, 684
Eureka Springs of Arkansas, 363
Ferracute Machine Co. Catalogue, 458
Fisher's Table of Cubic Yards in Lengths of 100 Feet, 283
Fleisch's Time-table Constructor and Speed Calculator, 457
Free Niagara, 453
Friction and Lost Work in Machinery and Millwork, 521
Frost & Peterson's Car Seats, Settees and Chairs, 746
Goodell & Waters, Wood-work of Machinery, 703
Gould & Eberhardt's Catalogue of Machine Tools, 637
Handy Estimate Blanks, 537
Haupt's American Engineering Register, 554
Hydraulic Engineering after the Holland Method, 534
Ingersoll Rock Drill Co. Catalogue, 209
Ivatt's Railway Management at Stations, 411
Japan, System of Iron Bridges for, 634
Johnson's Curve Tracing in Cartesian Co-ordinates, 138
Johnson's Manual of Topographical Surveying by Means of the Transit and Stadia, 506
Kanter's Hydraulic Engineering after the Holland Method, 354
Kidder's Architects' and Builders' Pocket-book, 348
Knowles Steam Pump Works Catalogue, 554
Kupka's Means of Communication in the United States, 122
Letters From Golden Latitudes, 778
Livermore Foundry & Machine Co. Catalogue, 522
Locomotive Engine Running and Management, 219
Locomotives, Light, H. K. Porter & Co., 251
Locomotives, Swiss Works at Winterthur, 746
Master Car-Builders' Association, History and Early Reports, 692
Master Car-Builders' Association, Proceedings of Annual Convention, 827
Materials of Engineering, 316
Manual of Statistics, 76
Mechanics, Pocket Book of, 587
New York State Survey, Report, 231

New York Stone Contracting Co., Beton Coignet, 537
Niagara, Free, 458
Niles Tool Works, Turning Steel-tired Car Wheels, 763
Nordamerikanischen Eisenbahnen in ihren Wirthschaftlichen und politischen Beziehungen, 393
Nyström's Pocket-book of Mechanics, 567
Osborne's Select Plans of Engineering Structures, 684
Osmond Dredge Co. Catalogue, 189
Pacific Coast, Hand-book of, 394
Phoenix Bridge Co., Album of Designs, 203
Porter, H. K. & Co., Light Locomotives, 251
Post & Co., United States Standard Postal Car Trimmings, 581
Practical Estimator, 537
Presses, Dies, etc., by Ferracute Machine Co., 458
Railroads of North America, 362
Railroad News, 397
Ralls, Rail Fastenings, etc., Tudor Iron Works, 732
Railway Management at Stations, 411
Railway Reporter, 330
Railway Reporter, 330
Railway Reporter, 330
Reynolds-Corlies Engine, 670
Richardson's Balance Slide Valves, 139
Roadmasters' Association of America, Report of 1884, 139
Rock Drills, Air Compressors, Quarrying Machines and Mining Machinery, 209
St. Louis & San Francisco, Eureka Springs, 363
St. Paul, Minneapolis & Manitoba, Letters from Golden Latitudes, 778
Saxby & Farmer's Railway Safety Appliances, 521
Schutte & Co., Steam Jet Engines, Catalogue, 208
Schrist's Hand-book and Railway Equipment and Mileage Guide, 441
Sibley & Kittredge's Handy Estimate Blanks, 537
Sibley & Kittredge's Practical Estimator, 537
Signals and Safety Appliances, 521
Signals and Switches, Saxby & Farmer Interlocking, 458
Sinclair's Locomotive Engine Running and Management, 219
Smith's Theory of Deflections, 42
Southern Pacific Hand Book, 391

Spirit Lake and Its Attractions, 363
Stations, Railway Management at, 411
Tables for Field Engineers, 340
Strength of Materials, Including Elasticity and Resistance to Impact, 11
Summer Homes in Piedmont Virginia, 363
Summer Sinterings, by the B. & O., 394
Summer Tourist's Wonder Land, 563
Swiss Locomotive & Machine Works, 746
Table of Cubic Yards in Lengths of 100 Feet, 283
Tables for Field Engineers, 340
Tables of Deflections and of Latitudes and Departures, 42
Thompson on Dynamo-Electric Machinery, 28
Thurston's Friction and Lost Work in Machinery, 521
Thurston's Materials of Engineering, 316
Time-table Constructor and Speed Calculator, 457
Topographical Surveying by Means of the Transit and Stadia, 506
Trautwine's Civil Engineers' Pocket Book, 362
Tudor Iron Works' Catalogue, 732
Tunneling Under the Hudson River, 187
Union Switch & Signal Co., Saxby & Farmer Interlocking Signals and Switches, 458
Verkehrsmittel in der Vereinigten Staaten der Nord America, 122
Virginia Midland, Summer Homes in Piedmont Virginia, 363
Von den Leyen's Railroads of North America, 362
Waddell's Designing Ordinary Highway Bridges, 234
Waddell's System of Iron Bridges for Japan, 634
Westinghouse, Church, Kerr & Co., 670
Westinghouse Engine, Applications in Railroad Practice, 669
Westinghouse Engine as Applied to Saw Mills and Planing Mills, 507
Westinghouse Machine Co. Catalogue, 669
Wilson Brothers & Co. Works Executed, 521
Wilson Walker & Co., Catalogue, 669
Windmill as a Prime Motor, 473
Wolf's Windmill as a Prime Motor, 473
Wood-working Machinery, 703
Wrought Iron on Railroad Cars, 669

ANNUAL REPORTS.

Alabama Great Southern, 358
Alabama, New Orleans, Texas & Pacific Junction, 688
Allegheny Valley, 539
Alliance, Niles & Ashtabula, 579
Ashtabula & Pittsburgh, 775
Atchison, Topeka & Santa Fe, 103, 202
Atlanta & West Point, 496
Atlantic & Pacific, 418
Baltimore & Ohio, 751
Baltimore & Ohio Employees' Relief Association, 193
Baltimore & Potomac, 407
Bay View, Little Traverse & Mackinaw, 640
Belt Railway, of Chicago, 131
Boston & Albany, 729, 816
Boston, Concord & Montreal, 342
Boston, Housatonic & Western, 151, 590
Boston & Lowell, 22
Boston, Revere Beach & Lynn, 832
Brunswick & Western, 101
Buffalo, New York & Philadelphia, 53
Burlington, Cedar Rapids & Northern, 638
Canden & Atlantic, 167
Canadian Pacific, 497
Carolina Central, 310
Central of Georgia, 816
Central Iowa, 215
Central Pacific, 128, 464, 479
Central Vermont, 342
Charlotte, Columbia & Augusta, 384
Charters, 448
Chesapeake & Ohio, 215
Chesapeake, Ohio & Southwestern, 512
Cheshire, 101
Chicago & Alton, 134
Chicago & Atlantic, 656

Chicago, Burlington & Quincy, 183, 228
Chicago & Eastern Illinois, 720
Chicago & Grand Trunk, 704
Chicago, Milwaukee & St. Paul, 101, 167
Chicago & Northwestern, 496
Chicago, Rock Island & Pacific, 324, 432
Chicago, St. Louis & Pittsburgh, 544
Chicago, St. Paul, Minneapolis & Omaha, 687
Chicago & Western Indiana, 431
Chicago & West Michigan, 592
Cincinnati, Hamilton & Dayton, 407
Cincinnati, Indianapolis, St. Louis & Chicago, 656
Cincinnati & Muskingum Valley, 449
Cincinnati, New Orleans & Texas Pacific, 183
Cincinnati, Richmond & Fort Wayne, 640
Cincinnati, Washington & Baltimore, 648
Cleveland, Columbus, Cincinnati & Indianapolis, 234
Cleveland, Mt. Vernon & Delaware, 839
Cleveland & Pittsburgh, 573
Cleveland, Lorain & Wheeling, 342
Columbia & Greenville, 496
Concord, 324
Connecticut & Passumpsic Rivers, 592
Connoton Valley, 71
Cumberland Valley, 569
Delaware & Hudson Canal Co., 101, 343
Delaware, Lackawanna & Western, 134
Denver & Rio Grande, 432
Detroit, Grand Haven & Milwaukee, 704
Detroit, Lansing & Northern, 608
Eastern Railroad Association, 273
East St. Louis & Carondelet, 576
East Tennessee, Virginia & Georgia, 800
Elizabethtown, Lexington & Big Sandy, 511
Erie & Pittsburgh, 576

Evansville & Terre Haute, 736
Fitchburg, 23
Flint & Pere Marquette, 599
Florida Railway & Navigation Co., 656
Fort Worth & Denver City, 37, 832
Galveston, Harrisburg & San Antonio, 638
Galveston, Houston & Henderson, 528
Georgia, 325
Georgia Pacific, 357
Grand Rapids & Indiana, 610
Grand Trunk, 277, 704
Green Bay, Winona & St. Paul, 623
Gulf, Colorado & Santa Fe, 391
Hannibal & St. Joseph, 656
Hanover Junction, Hanover & Gettysburg, 391
Hartford & Connecticut Western, 71, 831
Housatonic, 167
Huntingdon & Broad Top Mountain, 101
Illinois Central, 53, 134
Indiana, Bloomington & Western, 751
Indianapolis & Vincennes, 576
International & Great Northern, 528
Iron, 511
Jeffersonville, Madison & Indianapolis, 576
Kansas City, Fort Scott & Gulf, 512
Kansas City, St. Joseph & Council Bluffs, 656
Kansas City, Springfield & Memphis, 512
Kentucky Central, 214, 688
Knox & Lincoln, 832
Lake Shore & Michigan Southern, 294, 310
Lawrence, 213, 576
Lehigh Coal & Navigation Co., 128
Lehigh Valley, 52, 484
Little Miami, 445
Little Rock & Fort Smith, 544
Long Island, 21, 832

Louisiana & Missouri River, 327
Louisiana Western, 247
Louisville & Nashville, 560
Maine Central, 36
Manhattan, 736
Marquette, Houghton & Ontonagon, 277, 361
Massillon & Cleveland, 576
Memphis & Charleston, 527, 800
Mexican Central, 229
Michigan Central, 235
Milwaukee, Lake Shore & Western, 263
Minneapolis & St. Louis, 511
Missouri, Kansas & Texas, 528
Missouri Pacific, 87, 598
Mobile & Girard, 496
Mobile & Ohio, 799
Montpelier & Wells River, 480
Nashville, Chattanooga & St. Louis, 694
Natchez, Jackson & Columbus, 71
New Brighton & New Castle, 576
New Castle & Beaver Valley, 678
New Haven & Northampton, 87
New York Central & Hudson River, 816, 831
New York, Chicago & St. Louis, 151, 311
New York & Greenwood Lake, 407
New York, Lake Erie & Western, 768, 783
New York, New Haven & Hartford, 7
New York, Ontario & Western, 7
New York, Pennsylvania & Ohio, 407
New York, Providence & Boston, 71
New York Railroad Commission, 34
New York, Susquehanna & Western, 229
New York, West Shore & Buffalo, 7
Norfolk & Western, 95, 311
Northeastern (South Carolina), 151
Northern Central, 135

ANNUAL REPORTS.

Northern (New Hampshire), 325
Northern Pacific, 324
Northwestern Ohio, 576
Ogdensburg & Lake Champlain, 479
Ohio & Mississippi, 832
Old Colony, 860
Oregon Railway & Navigation Co., 709
Pacific Mail Steamship Co., 343
Panama, 544
Pennsylvania Company, 575
Pennsylvania & New York, 481
Pennsylvania Railroad, 150
Peoria, Decatur & Evansville, 214
Petersburg, 185, 831
Philadelphia & Reading, 37, 53
Philadelphia, Wilmington & Baltimore, 190
Pittsburgh & Castle Shannon, 128

Pittsburgh, Cincinnati & St. Louis, 448
Pittsburgh & Fort Wayne & Chicago, 342, 480, 570
Pittsburgh & Lake Erie, 37
Pittsburgh, Wheeling & Kentucky, 448
Portland & Ogdensburg, 264
Portland & Rochester, 832
Providence & Springfield, 832
Pulman's Palace Car Co., 720
Richmond & Danville, 842
Richmond & Petersburg, 832
Richmond & West Point Terminal Co., 263
Rochester & Pittsburgh, 71
Rome, Watertown & Ogdensburg, 7
Rumford Falls & Buckfield, 832
Rutland, 479
St. Louis, Alton & Terra Haute, 480

St. Louis, Iron Mountain & Southern, 528
St. Louis & San Francisco, 343
St. Louis, Vandalia & Terre Haute, 198
St. Paul & Duluth, 135
St. Paul, Minneapolis & Manitoba, 573, 607
Savannah, Florida & Western, 291
S-aboard & Roanoke, 295
Shenandoah Valley, 480
South Carolina, 183
Southern Pacific of California, 358
Terre Haute & Indianapolis, 198
Terre Haute & Logansport, 198
Texas & New Orleans, 317, 414
Texas & Pacific, 167, 537
Toledo, Ann Arbor & North Michigan, 294
Traverse City, 604
Troy & Greenfield, 407

Union Pacific, 190
Utah Central, 325
Utica & Black River, 128
Valley of Ohio, 832
Valley of Virginia, 832
Vicksburg & Meridian, 391
Virginia Midland, 21
Western North Carolina, 317
Western Union Telegraph Co., 790
West Jersey, 687
Wilmington & Northern, 479
Wisconsin Central, 168
Worcester, Nashua & Rochester, 7
York & Peachbottom, 310

ELECTIONS AND APPOINTMENTS.

Addison & Northern Pennsylvania, 142
Akron & Fort Wayne, 301
Alabama Great Northern, 716
Alabama Railroad Commission, 124
Albany & Susquehanna, 572
Albany & Raleigh, 301
Allegheny Valley, 253
Alintown, 45
Almaden & Saratoga, 402
Alton & St. Louis, 253
American Institute of Electrical Engineers, 333
American Institute of Mining Engineers, 142
American Society of Civil Engineers, 61, 253, 333, 380, 443
American Society of Mechanical Engineers, 747
American Street Railway Association, 701
American Ticket Brokers' Association, 353
American Train Dispatchers' Association, 414
American, Preston & Lampkin, 413
Annapolis & Baltimore Short Line, 710
Annapolis & Ellicott, 397
Annisston & Chattanooga, 173
Arizona Mineral Belt, 78
Arkansas & Grand Prairie, 414
Arkostok Central, 508
Artesia, Starkville & Grenada, 317
Ashuelot, 317
Association of American Railroad Superintendents, 253
Association of Railroad Telegraph Superintendents, 414
Association of Station Agents of the Boston & Albany Railroad, Boston & Worcester Division, 397
Atchison, Topeka & Santa Fe, 142, 230, 301, 349, 460, 747, 779
Atlanta & Charlotte Air Line, 173
Atlanta & West Point, 397, 492
Atlantic Coast, 39, 61
Atlantic Coast, St. Johns & Indian River, 349
Atlantic & Great Western, 747
Atlantic & North Carolina, 225
Atlantic & Pacific, 30, 349, 634, 701, 716, 811
Atlantic, Lockport & Lake Ontario, 14, 704
Augusta, Elberton & Chicago, 460
Augusta, Gibson & Sandersville, 109
Augusta & Knoxville, 317
Augusta & Savannah, 44
Austin & Northwestern, 521
Avon, Genesee & Mt. Morris, 124
Bachman Valley, 61
Bald Eagle Valley, 269
Baltimore & Drum Point, 397
Baltimore & Hanover, 61, 349
Baltimore & Ohio, 11, 39, 93, 109, 142, 157, 189, 269, 285, 333, 397, 722, 747, 785
Baltimore & Ohio Telegraph Co., 659
Baltimore & Philadelphia, 228
Baltimore & Potomac, 397
Baltimore & Pocomoke, 364
Batesville & Brinkley, 541
Bayfield Harbor & Great Western, 670
Beck Creek, Clearfield & Southwestern, 61, 157, 684, 701
Bedford & Bridgeport, 125
Bellaire & Moonhead Lake, 476
Belmont, Zanesville & Cincinnati, 572
Belmont, Nittany & Lemont, 290
Bell's Gap, 44
Belvidere Delaware, 124
Bennington & Rutland, 142, 157, 253
Berlin branch, 61
Bloomfield, 237, 476
Boston & Albany, 109, 142, 285, 705
Boston, Barre & Gardner, 109, 139
Boston, Concord & Montreal, 349
Boston, Hoosac Tunnel & Western, 556
Boston & Lowell, 30, 61, 311, 317, 349, 636
Boston & Maine, 14, 61, 365, 705
Boston & New York Air Line, 365
Boston & Providence, 717
Boston, Revere Beach & Lynn, 704
Boston Society of Civil Engineers, 205
Bradford, Bordell & Kinna, 61
Bradford, Bordell & Smithport, 61
Bradford, Eldred & Cuba, 199
Bradford, Richburg & Cuba, 61
Brattleboro & Bennington, 30
Bridgton & Saco River, 30, 704
Brooklyn, Bath & Coney Island, 93
Brooklyn & Long Island Cable, 414, 490
Brooks Locomotive Works, 380
Brookville, 765
Brotherhood of Locomotive Engineers, 701
Brotherhood of Railroad Brakemen, 716
Brunswick & Western, 14, 157, 239, 391, 317, 333, 747
Buffalo, New York & Philadelphia, 44, 333, 365
Buffalo, Rochester & Pittsburgh, 716
Buffalo Soft Coal Pool, 399
Buffalo & Southwestern, 159
Buena Vista & Ellenville, 492
Bureau & Northeastern, 397
Burlington, Cedar Rapids & Northern, 109, 333, 380, 682
Burlington, LaFayette & Western, 811
Burlington & Northwestern, 414
Burlington & Western, 44
Cadillac, Manistee Valley & Lake Michigan, 41
Cairo, Vincennes & Chicago, 285, 301, 381, 710
California Fast Freight Line, 157
California & Nevada, 237
California Southern, 795
Calumet & Ver, 253
Camden & Atlantic, 157, 293, 381, 732
Camden, Gloucester & Mt. Ephraim, 30, 41, 460
Canada, La Crosse & Southwestern, 511, 717
Canada Southern Line, 30, 365
Canadian Pacific, 109, 157, 221, 253, 285, 397, 589
Cape Fear & Yadkin Valley, 124, 157, 295
Cape Girardeau Southwestern, 205, 716
Car accountants' Association, 429
Caracquet, 604
Carolina Central, 317, 460
Carson & Colorado, 265
Catsaqua & Pocomoke, 717
Cattle King, 30, 429
Cedar Rapids & Clinton, 333
Cedar Rapids, Iowa Falls & Northwestern, 333
Central Club of Lake Accountants, 589
Central of Georgia, 44
Central & Chester, 705, 811
Central Iowa, 634, 732, 765, 811
Central Massachusetts, 761
Central Missouri, 124, 142
Central of New Jersey, 317
Central Ohio, 301
Central Pacific, 285
Central Passenger Committee, 253, 621, 811
Central Traffic Association, 414
Central Vermont, 44, 61, 333
Champlain, Havana & Western, 317, 381, 701
Charleston & Pittsburgh, 333
Charleston & Savannah, 180, 747
Charlotte, Columbia & Augusta, 701
Chartiers, 317
Chartiers & Youghiogheny, 44
Chattahoochee, 578, 844
Cheraw & Burlington, 761
Chesapeake & Delaware Canal, 365, 397
Chesapeake & Nashville, 460
Chesapeake & Ohio, 93, 157, 205, 237, 811, 828
Chesapeake, Ohio & Southwestern, 53
Cheshire, 317
Chester & Delaware River, 45
Chester & Lenoir, 428
Chicago & Alton, 142, 205, 237, 253, 365, 460, 701, 732

Chicago & Atlantic, 580, 747
Chicago, Burlington & Kansas City, 317
Chicago, Burlington & Northern, 241, 701, 733, 747
Chicago, Burlington & Quincy, 93, 142, 157, 189, 285, 301, 383, 349, 381, 670, 716, 811
Chicago, Central Indiana, Black Coal & Ohio River, 604
Chicago, Decatur & Minnesota, 333
Chicago & Eastern Illinois, 157, 253, 285, 652
Chicago, Emporia & Southwestern, 747
Chicago & E. & W. 221
Chicago, Freeport & St. Paul, 189, 237
Chicago & Grand Trunk, 173, 301, 716
Chicago & Great Northern, 109, 173, 289
Chicago & Indiana, 221
Chicago & Iowa, 511
Chicago, Milwaukee & St. Paul, 93, 142, 205, 237, 305, 381, 492, 572, 670, 829
Chicago & North Western, 14, 142, 157, 189, 285, 381, 414, 492, 572, 684, 716, 779, 828
Chicago Railroad Association, 290
Chicago, Rock Island & Pacific, 78, 221, 237, 305, 498, 414, 492
Chicago, St. Louis & Missouri River Association, 476
Chicago, St. Louis & Nashville, 333, 349, 414
Chicago, St. Louis & Pittsburgh, 189, 205, 636, 652, 705
Chicago, St. Meinrad & Ohio River, 761
Chicago, St. Paul, Minneapolis & Omaha, 381, 747
Chicago & Springfield, 355
Chicago & South Western, 78
Chicago & Western Indiana, 157, 221, 365, 428, 524
Chicago & West Michigan, 30, 670
Chicago, Wisconsin & Minnesota, 551
Chicago, Wisconsin & Northern, 221
Cincinnati & Eastern, 142, 205, 333, 572, 589, 604
Cincinnati, Georgetown & Portsmouth, 690
Cincinnati & Green River, 381
Cincinnati, Hamilton & Dayton, 157, 397, 828
Cincinnati, Indianapolis, St. Louis & Chicago, 221, 701, 716, 733
Cincinnati, Lebanon & Northern, 402, 508
Cincinnati, Lexington & Northern, 221
Cincinnati, New Orleans & Texas Pacific, 30, 121, 237, 285, 333, 365, 414, 428, 444
Cincinnati Railroad Association, 269
Cincinnati Railway Co., 221
Cincinnati, Richmond & Fort Wayne, 253
Cincinnati, Sandusky & Cleveland, 716
Cincinnati Southern, 795
Cincinnati, Van Wert & Michigan, 142, 414, 508
Cincinnati, Washburn & Michigan, 453, 444
Cincinnati, Washington & Baltimore, 237, 233, 701, 811
Cincinnati, Wheeling & New York, 30
Civil Engineers' Club of Cleveland, 189
Clarendon & Pittsford, 604
Clearfield & Jefferson, 157
Cleveland & Canton, 428
Cleveland, Columbus, Cincinnati & Indianapolis, 157, 285, 414, 492, 572, 604, 652, 670, 684, 733
Cleveland, Delphos & St. Louis, 333
Cleveland, Lorain & Wheeling, 317, 391
Cleveland & Mahoning Valley, 604, 624
Cleveland & Marietta, 109, 142, 444, 811
Cleveland & P. & T. 317
Cleveland Schenck, 189
Cleveland, Toledo & Lake Side, 253
Cleveland, Youngstown & Pittsburgh, 460
Colorado Railroad Commission, 253
Colorado Utah Association, 349, 508
Colorado Western, 299
Columbia & Greenville, 701
Columbia & Port Deposit, 142
Columbus, Chicago & Indiana Central, 365
Columbus & Cincinnati Midland, 333
Columbus, Hocking Valley & Toledo, 44, 173
Columbus, Hope & Greensburg, 173
Columbus & Mayfield, 173
Columbus, Springfield & Cincinnati, 684
Columbus & Rome, 701
Columbus & Western, 93
Columbus & Xenia, 93
Concord, 189, 319
Concord & Claremont, 319
Concord & Portsmouth, 652
Connecticut & Passaic Rivers, 93, 589
Consolidated Railroad Co., of Vermont, 333
Consolidation Coal Co., 142
Coopersburg & Susquehanna Valley, 189
Cornwall & Mount Hope, 257
Coudersport & Port Allegany, 61, 93
Covington & Macon, 428, 811
Crescent, Clearfield & New York, 142
Crookston, Minneapolis & Duluth, 508
Cumberland, 301
Daggett & Cairo, 349
Dallas & Northwestern, 317, 333
Dallas & Wichita, 78
Dakota Central, 381
Dakota & Great Southern, 428, 779
Dakota Railroad Commission, 253
Danville & New River, 215
Danville & Ohio River, 701
Danville & Shamokin, 45
Dawson, Broadford & Mt. Pleasant, 61
Dayton & Ironton, 717
Dayton & Union, 142
Decatur, Rochester & Red River, 476
Deerfield River, 317
Delaware, 761
Delaware & Bound Brook, 349
Delaware Division Canal Co., 93
Delaware & Hudson Canal Co., 517, 349, 652, 684, 701, 811
Delaware, Lackawanna & Western, 30, 142, 285, 317
Delaware, Maryland & Virginia, 44
Denver, Aspen & Grand River, 317
Denver, Memphis & Atlantic, 747
Denver & New Orleans, 365
Denver & Rio Grande, 157, 221, 237
Denver & Rio Grande Western, 541
Denver, Texas & Gulf, 717
Des Moines & Fort Dodge, 281
Des Moines & Northwestern, 30
Des Moines, Osceola & Southern, 237, 253, 285
Des Moines & St. Louis, 30
Des Moines Union, 30
Detroit, Grand Haven & Milwaukee, 301, 716
Detroit, Lansing & Northern, 333, 670, 733
Detroit, Mackinac & Marquette, 414, 536
Detroit & St. Clair, 145
Dover & Barrington, 301
Dubuque & Sioux City, 109
Duluth, Ada & Northern Dakota, 598
Duluth, Huron & Denver, 652
Duluth & Iron Range, 811
Dunkirk, Allegheny Valley & Pittsburgh, 253
Durango, Fort Lewis & Western, 109
Durham & Clarksville, 235
East Broadway & Waynesburg, 317
East Broad Top, 44
Eastern, 811
Eastern Heights, 636
Eastern Railroad Association, 333
Eastern Shore, 397
Eastern & Western Air Line, 828
East Georgia & Florida, 635
East Mahanoy, 45
East Pennsylvania, 45
East St. Louis & Condolet, 149
East St. Louis Connecting, 61
East St. Louis Terminal, 173
East Tennessee, Virginia & Georgia, 30, 44, 109, 124, 142, 389, 604, 811, 828
East Tennessee & Western North Carolina, 621
East Trenton, 349
East & West, of Alabama, 305, 414

El River & Eureka, 636
Elberton Air Line, 333
Elizabethtown, Lexington & Big Sandy, 285
Elmira, Cortland & Northern, 93
Emporia, Cortland & Northern, 93
Engineers' Club of Philadelphia, 44
Engineers' Society of Western Pennsylvania, 75
Endicott Connecting, 221
Erie & Wyoming Valley, 397
Evansville & Indianapolis, 301, 733
Evansville, Jackson & New Orleans, 701
Evansville, Seymour & Bellefontaine, 659
Evansville & Terre Haute, 747
Evansville, Terre Haute & Chicago, 414
Eureka Springs, 189
Eutawville, 221
Fairland, Franklin & Martinsville, 717
Fairmont & Gaston, 237
Fairmont, Morgantown & Pittsburgh, 14, 235, 811
Fargo, Moorhead & Northeastern, 541
Fargo & Southern, 414
Fitchburg, 78, 173, 215, 349, 444
Flint & Pere Marquette, 349, 414, 444
Florida Railway & Navigation Co., 621, 717, 779, 795
Fort Bragg, 333
Fort Madison & Northwestern, 173, 237
Fort Mason, Seneca & St. Johns River, 838
Fort Scott Equipment Co., 265
Fort Scott & Lincoln, 414
Fort Scott, Southwestern & Memphis, 205
Fort Smith, Wellington & Memphis, 334
Fort Wayne, Cincinnati & Louisville, 621
Fort Worth & New Orleans, 444
Fort Worth, Waxahachie & Sabine Pass, 397
Franklin & degantie, 747
Fremont, Elkhorn & Missouri Valley, 381, 733, 764
Freeport, Ironton, Mauston & Northern, 511
Galveston, Breckenridge & Leadville, 269
General Baggage Agents' Association, 78
Genesee Valley Terminal, 812
Georgia, 365, 397, 572, 705
Georgia Association of Traffic Lines, 78
Georgia Midland, 621
Georgia Pacific, 701, 747
Georgia Railroad Commission, 684, 733
Georgetown, Breckenridge & Leadville, 269
Gogebic & Lake Superior, 812
Golden Belt & Gulf, 499
Goldboro, Snow Hill & Greenville, 385
Graton & Greenbrier, 205
Grand Rapids & Indiana, 173, 444
Grand Rapids, Indiana & Manistee, 684
Grand Trunk, 351
Great Western Dispatch, 684
Greely, Salt Lake & Pacific, 269
Green Bay & Northern, 349
Green Bay, Winona & St. Paul, 205, 381
Green Cove Springs & Midland, 559
Greenwood, Laurens & Spartanburg, 109
Gulf, Colorado & Santa Fe, 189, 231, 717, 812
Hannibal & St. Joseph, 14, 30, 469, 733
Hannibal Union Depot, 524
Hanover Junction, Hanover & Gettysburg, 317, 652
Hanover & York, 61
Harrisburg, Portsmouth, Mt. Joy & Lancaster, 589
Hartford & Connecticut Western, 460, 784, 812
Hartford & Harlem, 14, 289
Hayward & Southern, 317
Herkimer, Newport & Poland, 428
Hopkins, 221
Hopkinsville & Cadiz, 237
Hoosac Tunnel Line, 205
Housatonic, 157
Houston, East & West Texas, 460, 492, 701
Houston & Texas Central, 142, 476, 621
Honeston & Shenandoah, 142, 349, 355
Huntingburg, Tell City & Cannelton, 747
Huntington & Broad Top Mountain, 365
Hutchinson, Glenora & Southern, 795
Illinois Central, 173, 189, 221, 365, 812, 828
Illinois Midland, 349, 636
Illinois Railroad & Warehouse Commission, 253
Illinois & St. Louis, 61
Indiana Block Coal, 414
Indiana, Bloomington & Western, 301, 317, 397, 444
Indiana, Illinois & Iowa, 30, 670, 717
Indiana & Illinois Southern, 189, 221
Indianapolis Belt, 199
Indianapolis, Decatur & Springfield, 189
Indianapolis, El River & Southeastern, 317
Indianapolis, Peru & Chicago, 781
Indianapolis & St. Louis, 142
Indianapolis & Vincennes, 301, 324, 681
Indiana Train Dispatchers' Association, 779
International Elevated, 441
International Association of Traveling & Passenger Agents, 414
International Bridge Co., 670
International & Great Northern, 233
International, of Maine, 747
Interstate, 365
Iowa City & Western, 533
Iowa Railroad Commission, 253
Ireland Heights, 214, 490, 717
Jacksonville & Atlantic, 490, 717
Jacksonville & Montgomery, 321
Jacksonville, Tampa & Key West, 795
James River Valley, 604
Jamestown & St. Paul, 623
Jamestown & Northwestern, 747
Jeffersonville, Madison & Indianapolis, 365, 717
Joliet & Chicago, 233
Joppatank & Western, 395
Kansas & Arkansas Valley, 779
Kansas City Belt, 366, 444
Kansas City, Fort Scott & Gulf, 205, 221
Kansas City, Fort Scott & Union Bluffs, 14, 30, 469
Kansas City & Southern, 319
Kansas City & Southwestern, 524
Kansas City, Topeka & Northwestern, 142
Kansas City Union Depot Co., 78
Kansas City, Wichita & Indian Territory, 93
Kansas City, Wyandotte & Northwestern, 779
Kansas & Gulf Short Line, 428, 812
Kansas & Missouri, 205
Kansas, Nebraska & Dakota, 636
Kansas Western, 301
Kent County, 397
Kentucky Coal & Salt, 189, 237, 269, 541, 636, 811
Kentucky & South Atlantic, 237
Kings County Elevated, 44
Kington & Pembroke, 142
Knox & Lenoir, 701, 812
Knoxville & Ohio, 733
Lackawanna & Pittsburgh, 61, 604
La Fayette, Newton & Wabash River, 572
Lake Erie & Port Smith, 301, 324, 681
Lake Shore & Michigan Southern, 301, 317, 701
La Moure & Pierre, 634
Lansing, Alma, Mt. Pleasant & Northern, 717
Lawrenceville, 779
Lawrence, 157
Leadville, South Park & London, 317
Leavenworth Northern & Southern, 717
Lehigh & Hudson River, 460, 812
Lehigh & Lackawanna, 45
Lehigh Valley, 61, 705
Lehigh & Wierseba Coal Co., 157
Len's Creek & Fort River, 717
Leroy & Caney Valley Air Line, 444
Lewisburg & Tyrone, 317
Little Rock & Port Smith, 301
Little Rock Junction, 317
Little Rock, Mississippi River & Texas, 189
Littlestown, 109
Lockport & Buffalo, 473
Long Island, 233

Los Angeles & San Gabriel Valley, 492, 747
Louisiana & Missouri River, 317, 381
Louisville Bridge Co., 39
Louisville, Evansville & St. Louis, 30, 93, 125, 334, 651
Louisville & Nashville, 30, 61, 78, 109, 142, 237, 652
Louisville, New Albany & Corydon, 579
Louisville, New Orleans & Texas, 93, 269, 285, 366, 779
Lowell & Andover, 157
Lowell & Framingham, 109
Lykens Valley, 109
Macon & Dublin, 237, 349
Maine Central, 30, 281, 812
Manchester & Keene, 349
Manchester & Lawrence, 308
Manhattan, 733
Manitoba & Northwestern, 779
Maine Boudier Car Co., 353, 517, 604, 717
Maricopa & Phoenix, 269
Marietta Mineral, 317
Marietta & North Georgia, 306
Marquette, Houghton & Ontonagon, 30, 334, 572
Marshall & Northwestern, 428, 460
Martin's Creek & Stroudsburg, 45
Maryland Stat. Directors, 397
Massillon & Cleveland, 168
Master Car Builders' Association, 414
Master Car & Locomotive Painters' Association, 604
Master Mechanics' Association, 414
Meadville & Linesville, 317
Memphis, Birmingham & Atlantic, 747, 779
Memphis & Charleston, 109, 704, 812, 828
Memphis & Little Rock, 524, 670
Memphis, Selma & Brunswick, 14, 386
Meredith & Conway, 219
Meriden & Cromwell, 351
Merrill & Abbotford, 764
Mexican Central, 78, 109, 189, 237, 253, 285, 414, 460, 572, 604, 717, 747
Mexican National, 157, 386
Michigan Central, 189, 301, 317, 684
Michigan City & Indianapolis, 747
Michigan & Ohio, 78
Michigan Railroad Commission, 221
Middle & Western States Freight Association, 189, 301
Midland (of Indiana), 414
Mifflin & Centre County, 125
Mill Creek & Minehill, 61
Milton & North Mountain, 764
Milwaukee, Lake Shore & Western, 381, 604, 621, 652, 670
Mineral Railroad & Mining Co., 109
Mineral Range, 477, 733
Minneapolis & Eastern, 119
Minneapolis & St. Louis, 632
Minneapolis, Lyndale & Minnetonka, 541
Minneapolis Union, 354
Minnesota & Northwestern, 189, 349, 477, 652, 812
Minnesota Railroad Commission, 253, 475
Mississippi River Bridge Co., 253
Mississippi & Tennessee, 121, 142, 779
Missouri, Iowa & Nebraska, 317
Missouri, Kansas & Texas, 349
Missouri Pacific, 124, 173, 237, 253, 334, 349, 366, 428, 624, 652, 670, 684, 705
Missouri Pacific in Kansas, 621
Missouri Pacific & Blair, 281
Mitchell, Orleans, Paoli, West Baden & French Lick, 351
Mobile & Girard, 469
Mobile & Ohio, 30, 414, 460, 795
Mobile & West Alabama, 221
Monongahela & East Shore, 61
Monongahela & Youghiogheny, 61
Monon, 779
Moorehead & Southwestern, 61
Morgan's Louisiana & Texas, 253
Mount City, 365
Mt. Carbon & Port Carbon, 61
Mt. Holly & Denver, 237
Mt. Washington, 524
Nantasket Beach, 828
Napanea, Tamworth & Quebec, 701
Nashville, Chattanooga & St. Louis, 604
Nashville & Decatur, 717
Nashua, Acton & Boston, 349
Nashua & Lowell, 349
Natchez, Jackson & Columbus, 78
Natchez, Red River & Texas, 301
National Association, General Passenger & Ticket Agents, 189
National Car Co., 399, 397
National Railroad Agents' Association, 301, 397
Nauvautick, 717, 747
Nebraska Railroad Commission, 397
Neillsville & Lake Superior, 93
Nequehoning, 45
Nevada Central, 14, 125, 349
New Albany, Leavenworth & Cannelton, 14
Newark, Somerset & Stratsville, 109
New Brunswick, 30, 269, 360, 381, 492, 525
Newburg, Dutchess & Connecticut, 764
New Castle Northern, 237
New England General Freight Agents' Association, 61
New England Roadmasters' Association, 634
New England & Southern Construction Co., 444
New England Train Dispatchers' Association, 701
New England & Southwestern, 738
New Haven & Northampton, 78
New Mexican, 301
New Mexico & Southern Pacific, 301
New Orleans & Northeastern, 61
Newport & Cincinnati Bridge Co., 157
Newry, 45
Newton, Walnut Valley & Denver, 396
New York Central & Hudson River, 254, 269, 285, 301, 387, 428, 444, 670, 791
New York Central Sleeping Car Co., 61, 109, 125, 237
New York, Chicago & St. Louis, 221, 301, 381
New York City & Northern, 45, 94
New York & Council Bluffs, 414, 652
New York, Fordham & Bronx, 795
New York & Harlem, 334
New York, Lake Erie & Western, 61, 78, 109, 237, 285, 349, 461, 572, 604, 636, 652, 684, 764, 779, 795, 812
New York & New England, 94, 428, 795
New York, New Haven & Hartford, 45, 460
New York & Northern Pennsylvania, 78
New York, Ontario & Western, 61, 78
New York, Pennsylvania & Ohio, 78, 189, 428, 684, 812
New York, Philadelphia & Norfolk, 125, 221, 238
New York, Pittsburgh & Chicago, 225, 428, 444
New York, Providence & Boston, 795
New York & Ridgefield, 397
New York & Sen Beach, 539
New York & Susquehanna & Western, 317
New York, Texas & Mexican, 93, 391, 604
New York, West Shore & Buffalo, 78, 142, 173, 189, 221, 317, 717
New York, Woodhaven & Rockaway, 306, 221, 254
New Zealand River, 349
Norfolk & Western, 209, 317, 349, 717
North Carolina, 490
North Carolina Midland, 747
North Conway & Mt. Kennerly, 24, 301, 397
Northeastern of Georgia, 701
Northeastern (South Carolina), 795
Northeast Pennsylvania, 45
Northern, of Canada, 299
Northern Central, 157, 334, 733
Northern (New Hampshire), 189, 366
Northern Pacific, 254, 399, 397, 428, 566, 621, 684
Northern Pacific Terminal Co., 285

ELECTIONS AND APPOINTMENTS.

North Pennsylvania, 45
Northwest Central, 541
Norwich & Worcester, 45
Oakland & Colby, 764
Ocean City, 118
Ogdensburg & Lake Champlain, 180, 301, 349, 414, 444, 704
Ohio & Baltimore Short Line, 333
Ohio Falls, French Lick & Terre Haute, 621
Ohio & Mississippi, 1, 492, 621, 670, 812, 828
Ohio Railroad Commission, 205
Ohio River, 397
Ohio Southern, 254, 301
Old Colony, 45, 694, 717, 764
Olmsted Falls & Lake Erie, 397
Omaha, Abilene & Wichita, 460
Omaha & North Platte, 634
Ontario & Quebec, 125
Order of Railway Conductors, 414, 701
Oregon & California, 61, 94, 100
Oregon-gonian, 254
Oregon Improvement Co., 397
Oregon Railway & Navigation Co., 45, 157, 221, 397
Oregon Short Line, 301
Oregon & Transcontinental Co., 100
Orleans, Paoli & Jasper, 460
Osage Valley, 397
Ottawa, St. Lawrence & Schenectady, 100
Ottawa, Waddington & New York, 694, 812
Owensboro & Nashville, 94
Pacific Coast Association, 349
Pacific Mail Steamship Co., 349
Pacific, of Missouri, 173
Paintersville & Port Perry, 142
Palatka, Ocala & Homosassa, 705
Pallades, 748
Park Point, 812
Pawnee & Valley, 349
Pennsylvania, 45, 100, 125, 142, 173, 205, 238, 269, 317, 334, 428, 469, 717, 734
Pennsylvania Canal Co., 100
Pennsylvania Canal Co., 397
Pennsylvania Company, 238, 254, 269, 360, 637, 652
Pennsylvania & New York, 45
Pennsylvania Schuylkill Valley, 334
Pennsylvania, St. Lawrence & New England, 381, 701
Pensacola & Atlantic, 20, 765
Pensacola & Memphis, 221, 245
Peoria, Decatur & Evansville, 508
Peoria & Pekin Union, 20
Perrin, 45
Petersburg, 34
Petersburg & Hillsboro, 361
Petersburg, 30
Philadelphia & Baltimore Central, 37
Philadelphia & Erie, 100
Philadelphia, Germantown & Chestnut Hill, 45
Philadelphia, Germantown & Norristown, 45, 748
Philadelphia, Germantown & Phoenixville, 318
Philadelphia & Lehigh Valley, 334
Philadelphia & Long Branch, 238
Philadelphia, Newton Square & Chester, 779
Philadelphia & Reading, 45, 61, 91, 100, 157, 391, 410, 492
Philadelphia, Reading & Pottsville Telegraph Co., 428
Philadelphia & Trenton, 142
Philadelphia, Wilmington & Baltimore, 45
Pine Creek, 61
Pine Creek & Susquehanna, 78
Pittsburgh, 318
Pittsburgh & Castle Shannon, 125
Pittsburgh, Chartiers & Youngloheny, 45
Pittsburgh, Cincinnati & St. Louis, 180, 205, 492, 536, 617, 652, 779
Pittsburgh, Cleve and Toledo, 142
Pittsburgh & Connellsville, 795
Pittsburgh, Fort Wayne & Chicago, 334
Pittsburgh & Lake Erie, 45
Pittsburgh, McKeesport & Youngloheny, 45
Pittsburgh, Marion & Chicago, 83
Pittsburgh & Neville Island, 61
Pittsburgh & Northeastern, 285, 414
Pittsburgh, Virginia & Charleston, 349
Pittsburgh & Western, 45, 78, 205, 492
Pomeroy & Newark, 317
Pontiac, Oxford & Port Austin, 525
Port Jervis & Port Austin, 525
Portland & Ogdensburg, 61
Portland, Saco & Portsmouth, 365
Port Royal & Augusta, 779
Portsmouth Bridge Co., 605
Portsmouth, Great Falls & Conway, 365

Potomac, Fredericksburg & Piedmont, 349
Pottsville & Mahanoy, 45
Princeton & Western, 381
Profile & Franconia Notch, 634
Providence & Springfield, 795
Providence & Stonington Steamship Co., 444
Providence, Warren & Bristol, 334, 770
Providence & Worcester, 94
Pullman's Palace Car Co., 245, 301, 637, 684
Quincy, Missouri & Pacific, 477
Railroad Conductors' Life Insurance Association, 64
Railroad Traveling Auditors' Association, 589
Raleigh & Augusta Air Line, 748
Reading & Chesapeake, 254
Reading & Columbia, 45
Reading & Lebanon, 428
Reading & Pottsville, 45
New City & Eldred, 61
Rich Hill, 205
Richmond & Allegheny, 812
Richmond & Danville, 45, 694, 701, 812, 828
Richmond, Fredericksburg & Potomac, 764
Richmond & Petersburg, 30, 770
Richmond & West Point Terminal Co., 684
Ridgely & New York, 221
Ridgely & Clearfield, 45
Rio Grande & Eagle Pass, 414
Rio Grande, Mexico & Pacific, 301
River Front, 45
Rhode Island & Massachusetts, 812
Roadmasters' Association of America, 684
Rochester & Ontario Belt, 61
Rochester & Pittsburgh, 748
Rock Island & Mercer County, 397
Rock Island & Peoria, 30, 397
Rome, 477
Rome & Carrollton, 305, 508
Rome & Chattanooga, 391
Rome, Watertown & Ogdensburg, 180, 748, 779
Roselle & South Plainfield, 779
Rumford Falls & Buckfield, 30, 706
Rural, 492
Saginaw, Tuscola & Huron, 349
Saginaw & Western, 334
St. Andrews Bay & Chipley, 254
St. Clairsville & Northern, 94
St. John Bridge & Railway Extension Co., 94
St. John & Malaga, 360
St. Johnsbury & Lake Champlain, 254, 694, 687
St. Joseph & Grand Island, 414, 572, 718
St. Joseph, Hanover & Southwestern, 142
St. Joseph Valley, 414, 444, 589
St. Joseph & Rio Grande, 684, 701
St. Joseph & Western, 238, 525
St. Louis, Alton & Terre Haute, 360, 585
St. Louis Bridge, 173
St. Louis & Cairo, 477, 681, 717
St. Louis, Carbondale, Metropolis & Paducah, 685, 748
St. Louis & Chicago, 360, 812
St. Louis Coal Railroad, 173, 205
St. Louis, Des Moines & Northern, 30
St. Louis, Emporia & Kansas City, 391
St. Louis, Fort Scott & Wichita, 173
St. Louis General Passenger Agents' Association, 78
St. Louis & Hannibal, 828
St. Louis, Iron Mountain & Southern, 173
St. Louis, Jacksonville & Chicago, 253
St. Louis & Kansas City Air Line, 361
St. Louis, Kansas City & Colorado, 30
St. Louis, Keokuk & Northwestern, 318
St. Louis & Northeastern, 221
St. Louis & St. Joseph, 205
St. Louis, Seaboard & Little Rock, 381
St. Louis & San Francisco, 318
St. Louis Tunnel, 173
St. Louis, Vandavia & Terre Haute, 45
St. Louis Union Depot Co., 173
St. Paul & Duluth, 414, 671
St. Paul Eastern Grand Trunk, 701
St. Paul, Minneapolis & Manitoba, 94, 157, 318, 557
St. Paul & Northern Pacific, 397
St. Paul & Sioux City, 397
St. Paul Union Depot Co., 349
Salina, Columbus & Southeastern, 828
Salina, Lincoln & Western, 779
Salisbury, 349
Salt Lake & Western, 414
San Antonio & Aransas Pass, 205, 460, 589, 604, 653
Sandy River, 45
Santa Fe & St. Johns River, 318

Saratoga & Almaden, 796
Savannah, Dublin & Western, 828
Schuylkill River East Side, 45
Schuylkill & Middletown Canal, 477
Schuylkill Valley, 61
Scioto Valley, 142, 306, 381
Seaboard & Roanoke, 301, 318, 366, 764
Seattle, Lake Shore & Eastern, 340, 414
Selma & Cahaba Valley, 78
Shamokin, Sunbury & Lewisburg, 45
Shamokin Valley & Pottsville, 318
Sharon & State Line, 109
Sharpsville, 157
Sheffield & Birmingham, 318, 604
Sheffield Terminal, 701
Shelby Iron Co., 189
Shell Beach, 173
Shenandoah Valley, 205, 238, 269, 318
Silver City, Denning & Pacific, 301
Silver Creek & Joplin, 305
Shousetown, Clinton & Frankfort, 61
Shreveport & Houston, 748, 828
Silver City, Denning & Pacific, 301
Silver Lake, 73, 238
Silver Springs, Ocala & Gulf, 180, 414, 557
Silver Springs, Higley & Southern, 144
Shenandoah Valley, 201, 318
Sioux City, Fairbank & Western, 11
Sioux City & Pacific, 381, 738
Slate Run, 30
Somerset & Cambria, 333
Sonoma Valley, 525
Southeastern, of Canada, 397
Southern Association of General Passenger & Ticket Agents, 557
Southern Central, 78, 157, 733
Southern Pacific, 158
Southern Pacific Co., 285, 381, 414, 557, 733
Southern Passenger Committee, 700
Southern Pennsylvania, 318
Southern Railway & Steamship Association, 490
South Chicago, 365
South Florida, 180
South Pacific Coast, 400
South Pennsylvania, 349
Southwestern Railway Association, 349
Southwest Pennsylvania, 173
Spanish Fort, 239
Spencer, 260
Springfield & New London, 94
State Line & Southern, 158
Staten Island, 234
Staten Island Rapid Transit Co., 285, 779, 736
Stony Brook, 414
Suburban Rapid Transit Co., 671, 701
Sullivan County, 363
Summit Branch, 109
Sunbury, Hazleton & Wilkes-Barre, 317
Sunbury & Lewistown, 317
Susquehanna Valley, 390
Superior & Southwestern, 525
Susquehanna & Clearfield, 45
Susquehanna Coal Co., 109
Sussex, 173
Swedesboro, 381
Sylvania, 381
Sylvania & Rocky Ford, 142, 238
Syracuse, Phoenix & Oswego, 174, 209
Talbotton, 349
Tavares, Brookville & Gulf, 349
Tavares, Orlando & Atlantic, 109, 349, 541
Tennessee & Great Northern, 701
Terre Haute & Indianapolis, 61, 238
Terre Haute & Logansport, 45
Texas Central, 234
Texas & New Orleans, 61
Texas & Pacific, 61, 107, 812
Texas & St. Louis, 142, 180, 251, 477, 557, 653
Texas, Santa Fe & Northern, 30
Texas Cattle Co., 400, 653
Texas Trunk, 344, 701, 764
Thorn Creek, 245
Toledo, Ann Arbor & North Michigan, 828
Toledo, Cincinnati & St. Louis, 318, 425, 444, 508, 761
Toledo, Columbus & Southern, 211, 717, 796
Toledo & Indianapolis, 205
Toledo, Kokomo & St. Louis, 238
Toledo & Ohio Central, 460, 812
Toledo, Peoria & Western, 114, 423, 444
Toledo & Southwestern, 173
Toledo & South Haven, 238
Toledo, Texas & Rio Grande, 397
Topeka, Frankfort & Marysville, 764
Topeka, Hiawatha & Chicago, 637
Transcontinental Traffic Association, 78

Transcontinental Transportation Co., 685
Trescow, 45
Troy & Boston, 94, 477
Tulare Valley & Giant Forest, 730
Turtle Creek Valley, 158
Tyrore & Clearfield, 317
Union Pacific, 61, 173, 205, 269, 334, 349, 428, 490, 492, 508, 604, 621, 671, 717, 779, 796, 813
United New Jersey, 349
United States Commissioner of Railroads, 221
Utah Central, 158, 334
Utah Eastern, 142
Utica & Black River, 748
Utica, Clinton & Birmingham, 61
Valley of Ohio, 142, 270
Valley of Virginia, 764
Vancouver & Yakima, 189
Vercligis Valley, Independence & Western, 249
Virginia Midland, 812
Vermont & Massachusetts, 381
Vermont Valley, 397
Vernon, Greensburg & Rushville, 94
Versailles & Midway, 318
Vicksburg & Meridian, 203, 301, 717
Vicksburg, Shreveport & Pacific, 318
Virginia & Carolinian, 61
Virginia Midland, 189, 206, 318, 671, 701
Virginia Railroad Commission, 238
Virginia, Tennessee & Georgia Air Line, 541
Wabash, Chester & West, 49
Wabash, St. Louis & Pacific, 31, 74, 94, 142, 173, 270, 310, 314, 414, 557, 589, 621
Walden's Ridge, 748
Ware River, 318
Warren & Sugar Grove, 173
Washington, Ohio & Western, 381, 706
Washington, 653
Watertown & Waterbury, 748
Waynesburg & Washington, 61, 779
Western, of Alabama, 397
Western Association of General Passenger & Ticket Agents, 125
Western & Atlantic, 109
Western Freight Association, 331, 397
Western General Freight Agents' Association, 109
Western Maryland, 717
Western North Carolina, 604, 701
Western Pennsylvania, 142
Western Railway Association, 91
Western Railway Club, 49
Western Society of Engineers, 61, 685
West Jersey, 158, 238, 270, 733
West Jersey & Atlantic, 158
Westmoreland & Fayette, 61
West Penn & Shenango Connecting, 493
Westport & Reading, 236
West Shore, 706, 812
West Shore Line, 26
West Superior Terminal & Transfer Co., 671
West Virginia Central & Pittsburgh, 78
Wheeling, Pittsburgh & Baltimore, 361
Whitfield & Jefferson, 549
Wichita & Western, 381
Wilemco & Pocomoke, 397
Wilkes-Barre & Harvey's Lake, 653
Wilmington, Clinton & Potomac, 508
Wilmington & Northern, 238, 361, 653
Wilmington & Weldon, 764
Wilton, 349
Wind Gap & Delaware, 45
Winona, Alton & Northern, 414
Winona & St. Peter, 381
Wisconsin Central, 100, 303, 381, 572
Wisconsin, Iowa & Nebraska, 238, 390
Wisconsin Railway & Navigation Co., 397
Wolfboro, 365
Wolf & Wisconsin Rivers, 604
Woodruff Sleeping & Parlor Car Co., 61, 206, 270, 336
Woodstock, 78
Woodstown & Swedesboro, 158
Worcester, 397
Worcester, Nashua & Rochester, 285, 301, 397, 444, 621, 812
Worcester & Shrewsbury, 717
Worcester & Somerset, 397
Worcester Union Depot, 149
Wyandotte, Nebraska & Northwestern, 589
Yardmasters' Mutual Benefit Association, 397
York & Peachbottom, 318

PERSONAL.

Abbott, Josiah G., 30
Adams, Charles R., 397
Adams, John, 173
Aiken, W. F., 192
Anderson, Adna, 541
Andrews, Robert, 589
Armstrong, W. J., 173
Armes, G. R. W., 270
Armstrong, Wm., 173
Armour, Philip D., 492
Atmore, C. P., 414
Habeck, David S., 557
Ball, B. H., 142
Bailey, James M., 125
Baker, Archer, 783
Baker, George A., 492
Baker, Thomas M., 142
Banker, James H., 110
Barbour, John S., 45, 178, 812
Barnett, J. David, 158
Barry, Thomas P., 637
Beach, G. M., 671
Beau, J. Q., 158
Bearden, Mark D., 653
Belknap, M. S., 62
Bigelow, L. Bert, 173
Bissel, W. S., 301
Blackstone, T. B., 685
Blackwell, Charles, 221
Boudy, Azariah, 748
Bostwick, E. L., 221
Bouscaren, G., 390
Bowen, E. S., 672, 683
Boyd, T. E., 270
Boyle, S. C., 748
Boylston, Daniel N., 30
Bradford, Samuel, 572
Brady, John G., 391
Bremont, Paul, 318
Briggs, R. E., 748
Brokaw, W. L., 158, 189
Brophy, S. M., 793
Brown, A. H., 158
Brown, B. Gratz, 812
Brown, L. S., 702
Brough, F., 783
Bruce, Nigel, 366
Brydon, Robert T., 270
Burke, M., 78
Burrus, Cicero, 414
Burpee, Isaac, 158
Busa, Myron F., 621
Butler, E., 78
Cable, J. B., 234
Caldwell, Wm., 572
Campbell, D. W., 381
Carey, George H., 189
Carpenter, A. V., 94
Carroll, W. E., 109
Carson, J. D., 158
Carson, John E., 508
Carroll, F. J., 381
Carr, J. W., 790
Cassatt, A. J., 381, 414
Chaute, Octave, 572
Clark, J. T., 812
Clayton, W. W., 477
Clements, Wm. M., 173
Clinton, Edmund E., 334
Clyde, Thomas, 45
Cobb, C. C., 206
Coburn, Abner, 828
Cochran, A. T., 334
Coe, W. W., 270
Colby, Peter S., 508
Collier, H. L., 414
Colton, Chauncy S., 508
Condon, Isaac H., 796
Cooke, Charles, 221
Cook, Burton C., 828
Cooper, M. A., 206

Cooper, Wm. E., 94
Coppock, W. R., 94
Cory, P. W., 62
Craig, W. J., 414
Crawford, C. M., 812
Creighton, James McC., 301
Culverhouse, Eli, 254, 381, 460, 706
Cummings, Charles H., 254
Dabney, F. Y., 318
Dane, John M., 78
Davis, C. A., 125
Davies, James S., 363
Davies, Wm. R., 14
Davis, A., 444
De Kater, Walter, 572
Dingley, George, 285
Doan, Thomas, 541
Doll, T. P., 611
Dorsey, C. J., 748
Donaldson, Andrew, 779
Donaldson, Arthur, 589
Donahue, Peter, 779, 804
Douglas, S. S., 254
Draper, David S., 254
Drexel, Francis A., 125
Duncan, Wm., 414
Dunham, A. J., 158
Dunn, W. M. S., 125, 589
Duprat, Alphonse, 512
Durant, Thomas C., 653
Dust, R. E., 508
Eastman, A. G., 397
Edgar, A. D., 424
Egery, Thomas N., 158
Emmett, Robert, 796
Evans, A. H., 381
Eysman, Frank, 109
Fairlie, Robert F., 536, 541
Fairley, A. H., 45
Felton, Samuel M., 173
Ferris, J. M., 94
Fink, Albert, 125, 414
Field, Cyrus W., 368
Fisher, Charles H., 770, 812
Fitch, Hudson, 512
Flad, Henry, 254
Flannery, Edgar, 653
Foley, Edward, 64
Fornes, M. N., 717
Forsyth, Samuel C., 276
Foster, Robert, 351, 270
Foster, Wm., 270
Fredericks, T. W., 78
Freer, David A., 94
Friedman, Walter, 323
Frick, George H., 341
Gage, Stephen T., 424
Garey, Leander, 78
Garrett, R. M., 409
Garrett, Robert, 621, 612
Garrison, Cornelius K., 301
Gault, John C., 414
Gay, Charles E., 381
Gays, H. W., 428
Gibbs, E. G., 125
Gilbert, Rufus H., 461
Giffman, George C., 94
Gillett, W. D., 685
Glencross, E., 301
Glenn, F. T. B., 589
Gorham, Thomas A., 94
Gowen, Franklin B., 685
Gowen, James E., 125
Grafton, W. M., 349
Graham, Charles, 30
Grant, John A., 14
Gray, Andrew C., 62
Gray, Charles J., 671, 685
Gray, George E., 414
Gray, Hugh, 604
Gray, H. A., 812
Green, W. Jerome, 78

Green, W. S., 361
Greenwood, Miles, 733
Grinnell, Joseph, 119
Grove, Charles A., 349
Guerber, Frederick S., 460
Gunter, C. Godfrey, 78
Guy, Joseph, 397
Hagdon, E. F., 334
Haggerty, G. A., 270
Hager, A. M., 397
Hail, Wm. H., 328
Halstead, Daniel B., 460
Harner, Thomas J., 189
Harding, B. L., 318
Harlow, J. J., 733
Harris, George B., 460
Harris, W. P., 62
Harrison, Wm. H., 142
Hartigan, J. G., 414
Hastings, J. B., 169
Hastings, John R., 621
Hatch, William, 717
Hayes, E. S., 694
Haywood, George F., 173
Heller, M. V., 541
Hender, A., 812
Henderson, C. E., 94, 109
Hillard, J. H., 428, 477
Hilliard, Thomas, 221
Hinman, M. L., 173, 701
Hodge, Wm. H., 62
Holt, David, 349
Hood, Wm., 414
Houston, D. H., 45
Houston, Theodore, 318
Howell, Courtland D., 557
Hughes, Arthur S., 637
Humphrey, Wm. R., 285
Hussey, Charles E., 470
Jackson, George E. B., 14
Jeffery, E. T., 671, 812
Jervis, John E., 40, 45, 49
Jewett, George, 733
Johann, Jacob, 349
Johnston, H. R., 158
Johnston, S. R., 80
Jones, John E., 444
Jordan, Conrad N., 285
Jordan, Edward W., 285
Kendrick, D. M., 285, 557
Kershaw, George T., 414
Kidd, Peabody & Co., 706
Kimball, Frederick J., 206
King, W. H., 705
Kinsley, Wm. C., 62, 143
Kinnicut, Francis H., 604
Klohs, Abraham, 270
Knapp, Alexander K., 366
Knicker, James A., 397
Lawton, Alexander R., 221
Leary, Arthur, 91
Leck, A. B., 685
Leinaker, A. W., 158
Levy, Simon, 812
Lindemann, Garrett B., 637
Lippincott, A. E., 125
Litchfield, Edwin C., 477
Little, B. A., 62
Lochane, O. A., 45
Lombard, Herman J., 173
Lorenz, William, 14
Lothrop, George V. N., 318
Lovejoy, Frederick, 158
Low, Edward T., 45
Luce, F. M., 623
Lyle, Robert B., 779
Lyman, Moses, 349
Macfarlane, James, 702
Manning, Daniel, 173
Marshall, H. M., 397
Marsh, Sylvester, 14
Mason, C. R., 45, 62

Matthias, W. S., 508
Maynard, Isaac, 143
McGinnis, Gen. George B., 717
McConkey, James, 251
McCool, D., 525
McCreary, James, 621
McCur, J. H., 779
McEl, J. F., 525
McKenna, Edward W., 701
McKernan, S. S., 396
McLean, John R., 572
McNeal, F. E., 270
Meeker, C. B., 189, 206, 285, 301
Meek, Robert, 734
Merriam, J. F., 718
Meredith, M. V., 444
Merrill, Sherburne S., 94, 97, 100, 125
Merrill, Joseph, 143
Mifflin, Samuel, V., 508, 541
Miller, Charles Griffin, 254
Miller, Ezra, 461
Miller, Rowell P., 109
Miller, Silvanus, 14
Miller, S. M., 58
Mills, Lansing, 254
Minnie, Isaac, 285
Mitchell, Alexander, 492
Monett, Henry, 557
Morrell, Daniel J., 557
Morrison, James S., 318, 381
Morrison, Wilson W., 541
Morris, Thomas B., 705, 779
Morris, W. S., 397
Morse, Henry S., 318
Munson, F. D., 119
Munson, Norman C., 334
Murray, E. P., 492
Myrtle, M. V. B., 766
Nelson, J. B., 14
Newell, John, 143
Newsom, Logan C., 706
Nichols, Foster, 717
Niven, R. Johnston, 705
Noble, Hanson H., 706
Nourse, Franklin H., 607
Nye, David, 14
Nyström, John W., 318
O'Brien, John F., 572, 589
Olds, George, 637
Oliphant, F. H., 508
Olsted, Samuel E., 366
Page, John B., 189, 461, 702
Palze, Wm. H., 748
Parker, Frank L., 45
Parnett, W. J., 254
Parsons, W. B., 701
Parsons, W. F., 779
Patterson, A. S., 301
Pease, Phineas P., 819
Peirce, Thomas Wentworth, 606, 706
Pendleton, Milo, 733
Perkins, George L., 525
Phipps, B., 258
Phipps, W. B., 318
Phillips, Charles, 173
Phillips, M., 444
Phinney, Charles H., 492
Pierpont, Wm. C., 828
Pitman, Charles B., 354
Player, John, 812
Polhemus, W. S., 158
Pope, John, 637
Porter, James D., 206
Porter, W. H., 414
Postell, John, 508
Powell, C. Berkeley, 45
Pratt, Calvin, 765, 812
Prendergast, F. S., 397
Priebe, Zenas C., 337, 701
Pringle, R. M., 325
Purdy, Thomas C., 381
Pusey, Samuel N., 366

PERSONAL.

Quintard, Orestes, 158
 Hailton, Edward M., 414
 Randolph, L. V. P., 221
 Rawlins, John, 201
 Raynor, James A., 62
 Reed, H. G. H., 589
 Reilly, John, 270
 Reynolds, E. M., 525
 Reynolds, Joseph H., 94
 Rice, Reuben N., 444
 Ripley, E. P., 671
 Ripley, Wm. B., 572
 Rives, A. L., 589
 Robinson, D. B., 428
 Robinson, D. J., 173
 Roosevelt, James, 142
 Ross, George B., 206
 Rowe, A. L., 525
 Roworth, Henry A., 492
 Russell, Horace, 318
 Rutter, James H., 45, 393, 397
 Sampsel, J. E., 94
 Sanborn, G. W., 572
 Sands, Joseph H., 270
 Seachord, James N., 62
 Schmidt, Max E., 318
 Scott, John, 349, 494
 Scott, Wm. L., 135
 Selby, W. H., 270
 Seney, George L., 14
 Setchel, J. H., 270
 Seymour, Mark T., 381
 Shaler, Robert A., 173
 Shattuck, W. B., 306
 Sheldon, A. C., 307
 Sherburne, Henry C., 173
 Shippen, W. W., 572
 Shipmaker, R. M., 110

Sickles, Theophilus E., 94
 Simmons, C. B., 301
 Sinclair, Andrew, 301
 Sisson, Oliver N., 460
 Sisson, Wilmon W. C., 653
 Skilton, George S., 637
 Skinner, G. B., 471
 Slaughter, Mercer, 621
 Smith, A. Q., 685
 Smith, Benjamin E., 607, 685
 Smith, Charles C., 425
 Smith, Day K., 206, 221
 Smith, Edgar T., 221
 Smith, F. W., 621
 Smith, J. M., 318
 Smith, Perry H., 222
 Snider, A. G., 492
 Snow, Franklin A., 460
 Soule, R. H., 770
 Spradlin, W. H., 414
 Spradlin, W. H., 704
 Stager, Aaron, 322
 Stanford, Leland, 82, 738
 Starring, Mason B., 334
 Stearns, Wm. B., 173
 Stedman, Charles M., 45
 Stephens, C. F., 307
 Stephens, John J., 206
 Stevens, Samuel H., 14
 Stickney, C. L., 109
 Story, J. M., 318
 Street, Philip, 334
 Striker, John, 301
 Strobel, C. L., 701
 Summerfield, E., 541
 Sutherland, W. T., 206
 Swan, David E., 45
 Talbot, Thomas, 653

Thomas, E. B., 604
 Thompson, C. J., 62
 Thompson, Clark W. T., 701
 Thomson, Frank, 62, 428
 Tillotson, Luther G., 94, 115
 Tilton, Lucien, 173
 Townsend, B. D., 653
 Townsend, Peter, 637
 Tows, Francis H., 306
 Toussaint, A. E., 145
 Tucker, A. A., 428
 Tucker, John, 158
 Tucker, Joseph F., 11, 14, 30, 125
 Tuckman, C. S., 812
 Turk, James E., 173
 Turner, C. S., 621
 Tuttle, Lucius, 30
 Tweed, Harrison, 62
 Tyler, George F., 492
 Upton, David, 158
 Urie, F. S., 45
 Valiant, George H., 285
 Van Buskirk, Wm. G., 764
 Van Cleave, J. C., 685
 Vandergrift, W. H., 492
 Vanderbilt, Wm. H., 785, 790, 796
 Vandyne, J. B., 327
 Verdery, James T., 460
 Villas, R. C., 318, 733
 Voss, J. F., 173
 Vreeland, Henry, 109
 Vining, E. P., 349
 Voorhees, Theodore, 671
 Wadley, J. E., 115
 Walden, W. A., 812
 Waldo, J. 589
 Walker, E. F., 653
 Walker, W. T., 812

Walthall, Edward C., 173
 Ward, G. F., 158
 Ward, S. G. & G. C., 796
 Warner, James M., 604
 Warren, B., 444
 Warren, Charles H., 14
 Watson, John, 671
 Watson, Peter H., 492, 546
 Wattles, J. S., 764
 Webb, J. C., 414
 Welch, Deming N., 158
 Wells, Reuben, 30
 Westinghouse, George, 14
 Whelan, E. J., 125
 Wheeler, O. C., 414
 White, Frank C., 109
 White, W. Howard, 444
 Whitner, B. M., 428
 Whitney, George, 186
 Whitney, Wm. C., 173
 Wilder, F. M., 733
 Wilder, Lyman, 671
 Wilder, Milton, 522
 Williamson, Matthias, 30
 Wilson, E. F., 414
 Wilson, James H., 701, 717
 Wise, Henry, 428
 Woodard, W. R., 189, 338, 354
 Woodward, Samuel, 142
 Worrall, James, 671
 Worsell, T. W., 301
 Wright, Luther, 381
 Yemans, Wm. H., 270
 Young, Wm., 621
 Young, C. F., 477

TRAFFIC AND EARNINGS.

RAILROAD EARNINGS.

Adirondack, 939

Alabama Great Southern, 22, 23, 62, 86, 87, 125, 149,

190, 214, 215, 270, 291, 293, 324, 354, 359, 388, 422, 423,

424, 508, 507, 541, 580, 531, 621, 640, 647, 685, 720,

727, 748, 789, 790, 812

Albany & Susquehanna, 595

Atchafalpa, Topeka & Santa Fe, 22, 23, 31, 62, 86, 87,

238, 294, 296, 302, 358, 359, 390, 444, 508, 507, 508,

423, 424, 441, 477, 508, 507, 525, 580, 581, 605, 616, 647,

671, 685, 726, 727, 748, 788, 790, 812, 829

Boston & Lowell, 749

Boston & Maine, 749

Boston & Providence, 733

Boston, Revere Beach & Lynn, 718

Brooklyn Elevated, 839

Brooklyn & Rockaway Beach, 829

Buffalo, New York & Philadelphia, 702, 726, 829

Buffalo, Rochester & Pittsburgh, 749, 765, 774, 788,

790, 812, 829

Burlington, Cedar Rapids & Northern, 14, 22, 23, 46,

22, 23, 46, 87, 110, 125, 149, 190, 214, 215, 254,

270, 285, 291, 293, 318, 358, 390, 392, 393, 422, 423,

424, 441, 477, 508, 507, 525, 541, 580, 581, 605, 621,

640, 647, 671, 726, 727, 748, 788, 790, 812, 829

California Southern, 382, 444, 492, 508, 589, 733

Canadian Pacific, 22, 23, 31, 46, 86, 87, 110, 125, 149,

190, 214, 215, 270, 291, 293, 324, 354, 359, 388, 422, 423,

424, 508, 507, 541, 580, 531, 621, 640, 647, 685, 720,

727, 748, 789, 790, 812

Central Iowa, 22, 23, 31, 62, 86, 87, 110, 149, 174, 214, 215,

238, 294, 296, 302, 358, 359, 390, 444, 508, 507, 508,

525, 580, 581, 605, 616, 647, 685, 726, 727, 748, 788, 790,

812, 829

Central Pacific, 22, 23, 46, 86, 87, 110, 125, 149, 174,

190, 214, 215, 270, 291, 293, 318, 358, 390, 392, 393,

422, 423, 441, 477, 508, 507, 525, 541, 580, 581, 605, 621,

640, 647, 671, 726, 727, 748, 788, 790, 812, 829

Chesapeake & Eastern, 110, 125, 149, 174, 190, 214, 215,

238, 294, 296, 302, 358, 359, 390, 444, 508, 507, 508,

525, 580, 581, 605, 616, 647, 685, 726, 727, 748, 788, 790,

812, 829

Chesapeake, Ohio & Western, 22, 23, 46, 86, 87, 110,

149, 174, 214, 215, 270, 291, 293, 318, 358, 390, 392, 393,

422, 423, 441, 477, 508, 507, 525, 541, 580, 581, 605, 621,

640, 647, 671, 726, 727, 748, 788, 790, 812, 829

Chesapeake, Burlington & Quincy, 22, 23, 31, 125, 174,

238, 294, 296, 302, 358, 359, 390, 444, 508, 507, 508,

525, 580, 581, 605, 616, 647, 685, 726, 727, 748, 788, 790,

812, 829

Chicago & Alton, 14, 22, 23, 46, 86, 87, 110, 125, 149, 174,

190, 214, 215, 270, 291, 293, 318, 358, 390, 392, 393,

422, 423, 441, 477, 508, 507, 525, 541, 580, 581, 605, 621,

640, 647, 671, 726, 727, 748, 788, 790, 812, 829

Chicago & Milwaukee & St. Paul, 14, 22, 23, 46, 86, 87,

110, 125, 149, 174, 190, 214, 215, 270, 291, 293, 318, 358,

390, 392, 393, 422, 423, 441, 477, 508, 507, 525, 541, 580,

581, 605, 616, 647, 685, 726, 727, 748, 788, 790, 812, 829

Chicago & Northwestern, 14, 22, 23, 46, 86, 87, 110, 125,

149, 174, 190, 214, 215, 270, 291, 293, 318, 358, 390, 392,

422, 423, 441, 477, 508, 507, 525, 541, 580, 581, 605, 621,

640, 647, 671, 726, 727, 748, 788, 790, 812, 829

Chicago & Western, 14, 22, 23, 46, 86, 87, 110, 125, 149,

174, 190, 214, 215, 270, 291, 293, 318, 358, 390, 392, 393,

422, 423, 441, 477, 508, 507, 525, 541, 580, 581, 605, 621,

640, 647, 671, 726, 727, 748, 788, 790, 812, 829

Cincinnati, Indianapolis, St. Louis & Chicago, 14, 22, 23,

23, 46, 86, 87, 110, 125, 149, 174, 190, 214, 215, 270,

291, 293, 318, 358, 390, 392, 393, 422, 423, 441, 477, 508,

507, 525, 541, 580, 581, 605, 621, 640, 647, 685, 726,

727, 748, 788, 790, 812, 829

Cincinnati, New Orleans & Texas Pacific, 22, 23, 46, 86,

87, 110, 125, 149, 174, 190, 214, 215, 270, 291, 293, 318,

358, 390, 392, 393, 422, 423, 441, 477, 508, 507, 525, 541,

580, 581, 605, 616, 647, 685, 726, 727, 748, 788, 790,

812, 829

Cincinnati, Washington & Baltimore, 14, 22, 23, 46,

86, 87, 110, 125, 149, 174, 190, 214, 215, 270, 291, 293,

318, 358, 390, 392, 393, 422, 423, 441, 477, 508, 507, 525,

541, 580, 581, 605, 616, 647, 685, 726, 727, 748, 788, 790,

812, 829

Cleveland, Akron & Columbus, 22, 23, 46, 86, 87, 110,

149, 174, 190, 214, 215, 270, 291, 293, 318, 358, 390, 392,

422, 423, 441, 477, 508, 507, 525, 541, 580, 581, 605, 621,

640, 647, 671, 726, 727, 748, 788, 790, 812, 829

Cleveland & Canton, 770, 788

Cleveland, Columbus, Cincinnati & Indianapolis, 14, 22,

23, 46, 86, 87, 110, 125, 149, 174, 190, 214, 215, 270,

291, 293, 318, 358, 390, 392, 393, 422, 423, 441, 477, 508,

507, 525, 541, 580, 581, 605, 621, 640, 647, 685, 726,

727, 748, 788, 790, 812, 829

Connecticut Valley, 718

Danbury & Cornwall, 22, 23, 46, 86, 87, 110, 149, 190,

214, 215, 270, 291, 293, 318, 358, 390, 392, 393, 422, 423,

441, 477, 508, 507, 525, 541, 580, 581, 605, 621, 640, 647,

685, 726, 727, 748, 788, 790, 812, 829

Cooperstown & Susquehanna Valley, 839

Danbury & Cornwall, 22, 23, 46, 86, 87, 110, 149, 190,

214, 215, 270, 291, 293, 318, 358, 390, 392, 393, 422, 423,

441, 477, 508, 507, 525, 541, 580, 581, 605, 621, 640, 647,

685, 726, 727, 748, 788, 790, 812, 829

Denver & Rio Grande, 22, 23, 46, 86, 87, 110, 125,

143, 149, 190, 214, 215, 270, 291, 293, 318, 358, 390,

422, 423, 441, 477, 508, 507, 525, 541, 580, 581, 605, 621,

640, 647, 685, 726, 727, 748, 788, 790, 812, 829

Denver & Rio Grande Western, 22, 23, 46, 86, 87, 125, 149,

190, 214, 215, 270, 291, 293, 318, 358, 390, 392, 393,

422, 423, 441, 477, 508, 507, 525, 541, 580, 581, 605, 621,

640, 647, 685, 726, 727, 748, 788, 790, 812, 829

Des Moines & Ft. Dodge, 22, 23, 46, 86, 87, 125, 149,

190, 214, 215, 270, 291, 293, 318, 358, 390, 392, 393,

422, 423, 441, 477, 508, 507, 525, 541, 580, 581, 605, 621,

640, 647, 685, 726, 727, 748, 788, 790, 812, 829

East Tennessee, Virginia & Georgia, 14, 22, 23, 46, 86,

87, 110, 125, 149, 174, 214, 215, 270, 291, 293, 318, 358,

390, 392, 393, 422, 423, 441, 477, 508, 507, 525, 541, 580,

581, 605, 616, 647, 685, 726, 727, 748, 788, 790, 812, 829

Detroit, Lansing & Northern, 14, 22, 23, 46, 86, 87, 110,

149, 174, 214, 215, 270, 291, 293, 318, 358, 390, 392,

393, 422, 423, 441, 477, 508, 507, 525, 541, 580, 581, 605,

621, 640, 647, 685, 726, 727, 748, 788, 790, 812, 829

East Tennessee, Virginia & Georgia, 14, 22, 23, 46, 86,

87, 110, 125, 149, 174, 214, 215, 270, 291, 293, 318, 358,

390, 392, 393, 422, 423, 441, 477, 508, 507, 525, 541, 580,

581, 605, 616, 647, 685, 726, 727, 748, 788, 790, 812, 829

Elkabetown, Lexington & Big Sandy, 22, 23, 46, 86,

87, 110, 125, 149, 174, 214, 215, 270, 291, 293, 318, 358,

390, 392, 393, 422, 423, 441, 477, 508, 507, 525, 541, 580,

581, 605, 616, 647, 685, 726, 727, 748, 788, 790, 812, 829

Evansville & Terre Haute, 22, 23, 46, 86, 87, 125, 149,

190, 214, 215, 270, 291, 293, 318, 358, 390, 392, 393,

TRAFFIC AND EARNINGS.

Buffalo Rates, 349
 Chesapeake & Ohio, 15, 95, 143, 222, 285, 350, 415, 461,
 522, 604, 702, 748, 829
 Chesapeake & Ohio Canal, 222, 302, 368, 440, 718, 780
 Chicago & Alton, 143
 Chicago Receipts, 45, 765
 Coal Movement, 15, 45, 62, 78, 94, 110, 125, 143, 158,
 190, 206, 222, 234, 270, 285, 302, 318, 334, 349, 366,
 381, 398, 414, 429, 444, 461, 477, 492, 508, 525, 541,
 557, 572, 589, 604, 621, 637, 653, 702, 718, 733, 748,
 765, 779, 796, 812, 829
 Coke, 110, 173, 238, 318, 381, 444, 525, 589, 733, 796
 Coko Pool, 45, 143
 Colorado Production, 143
 Cumberland, 30, 45, 62, 78, 94, 110, 125, 143, 158, 173,
 190, 206, 222, 234, 270, 285, 302, 318, 334, 349, 366,
 381, 398, 414, 429, 444, 461, 477, 492, 508, 525, 541,
 557, 572, 589, 604, 621, 637, 653, 702, 718, 733, 748,
 765, 779, 796, 812, 829
 Delaware & Hudson Canal Co., 125, 206, 354, 270,
 334, 398, 477, 542, 604, 702, 748, 812, 829
 Delaware, Lackawanna & Western, 62, 125, 206, 254,
 270, 334, 398, 477, 542, 604, 702, 748, 812, 829
 Grand Trunk Contracts, 216
 Great Kanawha River Shipments, 393
 Huntington & Broad Top, 95, 110, 158, 173, 222, 238,
 254, 270, 334, 398, 477, 542, 604, 702, 748, 812, 829,
 733, 796, 780
 Illinois Bituminous, 95
 Lehigh Valley, 62, 125, 206, 254, 270, 334, 398, 477,
 542, 604, 702, 748, 812, 829
 Lehigh Valley Bituminous Coal Lands, 541
 Missouri Pacific, 270
 Monongahela Improvement Co., 110, 621
 New York Lake Erie & Western, 62, 125, 206, 254,
 270, 334, 398, 477, 542, 604, 702, 748, 812, 829
 Norfolk & Western, 368, 525, 637, 718, 779
 Northern Central, 45, 143, 302, 381, 444, 525, 702, 760
 Nova Scotia Shipments, 270
 Ohio Production, 392
 Pennsylvania Coal Co., 62, 125, 206, 254, 270, 334, 398,
 477, 542, 604, 702, 748, 812, 829
 Pennsylvania & New York, 62, 110, 173, 254, 318, 381,
 444, 511, 529
 Pennsylvania Railroad, 15, 30, 45, 62, 78, 94, 110, 125,
 143, 158, 173, 190, 206, 222, 234, 254, 270, 285, 302,
 318, 334, 350, 366, 381, 398, 415, 429, 444, 461, 477, 492,
 508, 525, 541, 557, 572, 589, 604, 621, 637, 653, 702, 718,
 733, 748, 765, 779, 796, 812, 829
 Philadelphia & Reading, 62, 125, 206, 254, 270, 334,
 398, 477, 542, 604, 702, 748, 812, 829
 Rochester & Pittsburgh, 74
 St. Louis Receipts, 94, 461

San Francisco Receipts, 45, 254, 381
 Southwest Virginia Improvement Co., 30, 125, 222,
 302, 525
 Tennessee Coal, Iron & Railroad Co., 79, 308, 402,
 734
 Tennessee Production, 110
 MISCELLANEOUS TRAFFIC NOTES.
 Baggage, Checking Hand, 685
 Baggage, Concealed Losses of, 637
 Blue Line, 302
 Boston Fast Freight Line Agencies, 765
 Boston Passenger Pool, 765
 Boston Passenger Traffic, 765
 Boston Traffic Notes, 46, 79, 174, 255, 286, 302, 461,
 525, 590, 604, 653, 793
 Brooklyn Bridge, 734
 Buffalo Grain Traffic, 397, 429, 509, 573, 654, 717, 780
 Burr, C. A. & Co., 270
 California Emigrant Tickets, Stop-overs on, 95
 California Fast Freight Line, 665
 California Fruit Shipments from, 637, 718
 California Through Freight, 62, 158, 424, 477, 590
 California Wheat and Meat by Rail, 156
 Cars Destroyed or Damaged on Private Tracks, 334,
 398
 Central Iowa Association, 367, 415, 671, 734, 813
 Central Traffic Association, 238, 255, 319, 415, 445,
 542
 Central Passenger Committee, 286, 335, 415, 461, 493,
 748
 Central Pool, 765
 Chicago East-bound Freight Pool, 95
 Chicago Live Stock Shipments, 686
 Chicago Lumber Traffic, 31, 270
 Chicago-Ohio River Pool, 46, 110, 318, 350, 398, 736, 813
 Chicago, St. Louis & Missouri River Passenger Assn-
 ciation, 398, 415, 477, 557, 702, 734
 Chicago Traffic Meetings, 702
 Chicago Traffic Notes, 671, 685
 Colorado & California Association, 477, 492, 734
 Colorado Utah Association, 62, 65, 125, 350, 367, 398,
 429, 477, 557, 605, 653, 734, 748, 765
 Commercial Tickets, 125, 158
 Commissions on Passenger Business, 79, 125, 415, 579,
 813
 Cotton, 15, 31, 40, 62, 79, 94, 110, 125, 143, 158, 173,
 190, 206, 222, 234, 255, 270, 286, 302, 319, 334, 350,
 366, 381, 398, 415, 429, 445, 461, 477, 492, 508, 525,
 541, 557, 572, 589, 604, 621, 637, 653, 702, 718, 733,
 748, 765, 780, 796, 812, 829
 Corpses, Transportation of, 493

Curious Traffic, 705
 Cut Trucks, 627
 Decatur Pool, 300
 Dining Car Service, New, 367
 Discrimination Against Cars, 461
 Duluth Flour Shipments, 730
 Duluth, New Lake Line to, 829
 East-bound Passenger Pool, 509
 Emigrants' Movables, 222
 Explosives, Transportation of, 62
 Express Matter in England, Cars and Trains for, 46
 Fast Freight Line Consolidation, 717
 Fast Stock Trains, 45
 Florida Through Lines, 637
 Florida Winter Travel, 270
 Fraudulent Shipments, 445
 Fruit Shipments from California, 637
 Gunsmoke Stock Trains, Charges for, 335
 Georgia Railroad Commission, 733
 Grain Doors, Furnishing, 270
 Grain Movement, 14, 16
 Great Western Dispatch, 233
 Indianapolis, Car Movement at, 813
 Joint Executive Committee, 171, 190, 429, 461
 Joint Western Classification Committee, 622, 637
 Lake Superior Ore, 307, 445, 509, 573, 590, 603,
 654, 718, 734, 765, 793
 Lake Superior Traffic over the Chicago & Omaha, 813
 Local Shipments to Kansas, 222, 367
 Lumber Shipments, Saginaw Valley, 671, 726
 Manitoba Pool, 590, 653, 671
 Missouri Freight Agents' Meeting, 429
 Montana Stock Traffic, 62
 New England Traffic, 471, 734
 New Enterprise, 270
 New Traffic Association, 190
 New York City Passenger Traffic, 46
 New York, Division of Freight at, 189
 New York Elevated Roads, Day's Travel on, 545
 New York State Canal, 234, 318
 Northern Pacific Stock Traffic, 813
 Northern Pacific, Tea Over the, 403
 Northwestern Traffic Association, 307, 415, 477, 493,
 748, 765, 780, 813
 Pacific Coast Association, 232, 319, 653, 718
 Pacific Coast, Emigrants to, 645
 Pacific Coast Wheat Exports, 190
 Passenger Agreement, 31
 Passenger Business to Washington in the Inaugura-
 tion Week, 174

Passenger Commissions, 79, 125, 415, 573, 813
 Passenger Lines, New, 46, 265, 382, 557, 780
 Passenger Meeting, 382
 Passenger Notes, 110, 143, 158, 190
 Petroleum, 15, 91, 143, 206, 250, 308, 429, 492, 557, 622,
 717, 773, 828
 Quarantine for Eastern Cattle, 445
 Mackay, Transportation of, 286
 Railway Car Association, 334
 Saginaw Valley Lumber Shipments, 671, 726
 St. Louis Iron Receipts, 461
 St. Louis Live Stock Receipts, 829
 San Francisco Passenger Association, 671
 San Francisco Wheat Exports, 477, 813
 Sault Ste. Marie Canal, 63
 Scandinavian Excursions, 765
 Southern Association of General Passenger Agents
 903
 S. uthern Fruit Traffic, 384
 Southern Passenger Committee, 653, 780, 796
 Southern Passenger Traffic Association, 31
 Southern Pool, New, 829
 Southern Railway & Steamship Association, 110,
 125, 143, 222, 286, 307, 398, 461, 493, 509, 573, 590,
 603, 627, 653, 685, 702, 765, 813, 829
 Southern Railway Association, 65, 350, 398, 419,
 654, 671, 718, 813
 Stock cars, Double-deck, 717
 Stop-overs on Pacific Coast Emigrant Tickets, 306
 Tea Over the Northern Pacific, 403
 Texas Pool, 429, 477, 493
 Texas Traffic Association, 509, 525, 542, 557, 622
 Thousand Mile Tickets, 415
 Traffic Notes, 671, 685
 Transcontinental Fast Freight Line, 174
 Transcontinental Traffic Association, 62, 70, 110,
 158, 174, 190, 206, 222, 238, 350, 367, 396, 414, 590,
 653, 702, 813
 Transfers of Freight at New York, 302
 Trunk Line Agreement, 729, 737, 765
 Trunk Line Meeting, 110, 206, 332, 398, 429, 477, 493,
 748, 765, 813
 Trunk Line Organization and Rates, 737
 Trunk Line Passenger Pool, 671
 Watermelons, 302, 509
 Wells, Fargo & Co.'s Express, 685
 Western Freight Association, 335, 557, 671, 734, 780,
 813
 Western Passenger Meeting, 238
 Western Traffic Meeting, 234
 Western Trunk Lines Association, 206, 338, 813
 Western Weighing Association, 717, 734, 813

RAILROAD LAW.

Arkansas, Collection of Freight Charges in, 174
 Arkansas, Telegraph Rights of Way in, 590
 Baggage, Liability for—Wrongful Detention, 286
 Baggage, Loss of—Responsibility, 367
 Beland Track Drill Patent, 493
 Bill of Lading, Conditions on—Injury to Live Stock,
 399
 Bonus to a Railroad, Contract to Pay, 763
 Bridge, Low—Injury to Employee, 780
 Car Coupler Law—Michigan, 477
 Cars, Defective—Liability for Death of Employee,
 286
 Cars, Responsibility for, 734
 Car Trusts, 169
 Charter Exemption from Taxation, 153, 238
 City, Speed of Trains in—Negligence, 797
 Claims Accruing Before Receiver's Appointment, 95
 Color Blindness in Ohio, 296
 Compelling Companies to Build Stations, 605
 Conductor's Liability, 765
 Connecticut Short-haul Law, 367
 Contractor's Employee Has No Remedy Against the
 Company, 462
 Contract with Shipper, 462
 Contract—Ticket at Reduced Fare, 780
 Contract to Pay Bonus to a Railroad, 763
 Crossing Collision—Negligence, 622
 Crossing the Track, 8
 Crossing the Track—Negligence, 110
 Damage by Fire—Beland Patent, 493
 Damages by Fire—Insurance, 429
 Damages for Killing a Person, Measure of, 126
 Discharge List—Label, 15
 Discrimination—Rates, 813
 Dog, Killing a, 797
 Electric Signal Patent Cases, Decision in, 222
 Employee, Injury to, Heavy Verdict for, 542
 Employee, Injury to—Low Bridge, 780
 Employee, Injury to—Negligence of Fellow Servant,
 79

Employee, Injury to—Negligence, 31, 143
 Employee, Liability for Death of—Defective Cars, 286
 Employee, Liability for Wrongful Act of, 369
 Employee Must Stand Risks Incidental to his Occupa-
 tion, 445
 Employee's Wrong-doing, Liability for, 445
 Ejecting a Passenger—Damages, 126
 Express Company, Right to Make Exclusive Con-
 tract with, 685
 Fees of Receivers and Trustees, 634
 Fellow Servant, Negligence of—Injury to Employee,
 79
 Fellow Servants, Law of, 190, 718
 Fire, Liability for Damage by, 235
 Free Passes—Leasee's Liability for Contract, 143
 Freight Charges, Collection of, in Arkansas, 174
 Goods Damaged in Transit, Liability for, 718
 Grade Crossings, Signals at—Maine Law, 362
 Highway Grade Crossings in Massachusetts, 280,
 385
 Highway Grade Crossings in New Hampshire, 557
 Incorporated Cities, Tracks in, 222
 Injury to Employee, Heavy Verdict for, 542
 Injury to Passenger—Burden of Proof, 110
 Injury to Passenger—Negligence, 829
 Insurance—Damages by Fire, 429
 Insurance—Loss of Property in Transit, 429
 Interstate Commerce, 637
 Interstate Commerce, State Interference, 685
 Interstate Commerce, Taxing, 315, 367
 Interstate Commerce, Taxing, 315, 367
 Interstate Commerce, Taxing, 315, 367
 Kansas Railroad Legislation, 297
 Kentucky Railroad Tax Cases, 749
 Killing a Dog, 797
 Killing a Person, Measure of Damages for, 126
 Killing a Person—Presumption of Negligence, 174
 Land Grant Case, 590
 Leases, Railroad, in New Jersey, 302
 Leasee's Liability for Contract—Free Passes, 143
 Liability for Goods Damaged in Transit, 718
 Brooklyn, Bath & Coney Island Foreclosure Sale,
 285
 Brooklyn Elevated, 319, 399
 Brooklyn & Long Island Cable Co., 468
 Brooklyn, Bath & Coney Island Foreclosure Sale,
 285
 Brooklyn Elevated, 319, 399
 Brooklyn & Long Island Cable Co., 468
 Brotherhood of Locomotive Engineers, 109, 476, 701
 Brotherhood of Locomotive Firemen, 443, 621, 636
 Brotherhood of Railroad Brakemen, 701
 Brunswick & Western, 174, 638
 Buckingham, 393
 Buena Vista, 111
 Buena Vista & Ellipse, 402
 Buffalo, New York & Philadelphia, 63, 95, 111, 125,
 143, 159, 223, 335, 397, 382, 396, 462, 435, 499, 520,
 542, 573, 654, 672, 686, 718, 734, 749, 797
 Bureau of Northern, 319
 Burlington, Cedar Rapids & Northern, 70, 111, 319,
 718
 Burlington & Northwestern, 111
 Burlington & Western, 15
 Cadillac, Manistee Valley & Lake Michigan, 46
 Cadillac & Northeastern, 558
 Cairo, 239
 Cairo, Vincennes & Chicago, 367, 542, 747
 Calabasas, Tucson & Northwestern, 255, 350
 Calhoun, Sac City & Dakota, 126
 California & Nevada, 239
 California Southern, 15, 31, 63, 126, 143, 287, 382, 429,
 598, 573, 599, 616, 702, 718, 734, 749
 Calumet River, 223
 Camden & Atlantic, 70
 Camden, Gloucester & Mt. Ephraim, 319, 418
 Canada Atlantic, 126
 Canada, La Crosse & Southwestern, 143
 Canada Southern, 702, 731
 Canadian Pacific, 126, 180, 207, 223, 303, 319, 335, 367,
 396, 445, 454, 530, 560, 622, 635, 651, 672, 686, 718,
 731, 749, 797
 Canton & St. Lawrence River, 15
 Cape Fear & Yadkin Valley, 368, 191, 207, 287, 590
 Cape Girardeau & Northwestern, 335, 573, 718, 781
 Car Accountants' Association, 317, 380, 397, 421, 658
 Carquest, 606
 Carversville, 638
 Carolina Central, 126, 207, 606, 638
 Carson & Colorado, 402, 526
 Cattle King, 367
 Central Association of Railroad Superintendents,
 626, 492
 Central Branch, Union Pacific, 101, 654
 Central Club of Car Accountants, 569
 Central of Georgia, 63, 382, 445
 Central & Chesapeake, 397, 813
 Central Iowa, 15, 79, 126, 223, 303, 402, 672, 638, 749,
 751

Liability for Wrongful Act of an Employee, 369
 Label—Railroad Company's Discharge List, 15
 Live Stock, Injury to—Conditions on Bill of Lading,
 399
 Loss of Property in Transit—Insurance, 429
 Mail Transportation, Claims for, 31
 Maine Law—Signals at Grade Crossings, 362
 Maine Railroad Law, 15
 Massachusetts, Highway Grade Crossings in, 280,
 385
 Massachusetts, Regulating Rates in, 569
 Michigan Car Coupler Law, 477
 Mississippi Railroad Commission Law, 271
 Nebraska Railroad Law, 190
 Negligence—Crossing Collision, 622
 Negligence—Crossing the Track, 110
 Negligence—Injury to Employee, 31, 143
 Negligence—Injury to Passenger, 829
 Negligence, Presumption of—Killing a Person, 174
 Negligence—Road Crossing Accident, 445
 Negligence—Speed of Trains in a City, 797
 New Hampshire, Highway Grade Crossings in, 557
 New Jersey Railroad Leases, 302
 New Jersey Railroad Legislation, 297
 New Jersey Railroad Taxation, 350
 Not Intestate and Commerce, 637
 Ohio Examinations for Color Blindness in, 286
 Ohio Supreme Court Decision on Discrimination in
 Rates, 813
 Oregon Railroad Law, 296
 Partner, Railroad Company Cannot Be, 223
 Passenger, Ejecting—Damages, 126
 Passenger, Injury to—Burden of Proof, 110
 Passenger, Injury to—Negligence, 829
 Passenger, What Constitutes a, 415
 Railroad Commission, Powers of, 654
 Railroad Company Cannot Be a Partner, 223
 Railroad, What Constitutes a Public, 463
 Rates Discrimination in, 813
 Rates on Inter-state Traffic, 286, 302
 Rates, Regulating in Massachusetts, 569

Rates, Right to Fix, 622
 Receiver, Claims Accruing Before Appointment of,
 95
 Receivers and Trustees, Fees of, 654
 Reorganization, Legislative Authority Over, 382
 Responsibility for Cars, 734
 Responsibility for Loss of Baggage, 367
 Richardson Safety Valve Patent, 63
 Right to Compel the Establishment of a Station, 557
 Right to Fix Rates, 622
 Road crossing Accident—Negligence, 445
 Safety-valve Patent, Richardson, 63
 Short-haul Law, Connecticut, 367
 Signal Patent Cases, Decision in, 222
 Signals at Grade Crossings—Maine Law, 362
 South Carolina Railroad Legislation, 297
 Speed of Trains in a City—Negligence, 797
 State Railroad Commission, Powers of, 671
 State as a Stockholder—Legislative Authority over
 Reorganization, 382
 Stations, Compelling Companies to Build, 605
 Stations, Right to Compel the Establishment of,
 557
 Strikers, When in Contempt of Court, 350
 Taxation, Charter Exemption from, 153, 238
 Taxation, Railroad, in New Jersey, 350
 Tax Cases, Kentucky Railroad, 749
 Taxing Interstate Commerce, 255, 367
 Telegraph Rights of Way in Arkansas, 590
 Tennessee Bond Cases, 362
 Tickets at Reduced Fare—Contract, 780
 Track Drill Patent, Beland, 493
 Tracks in Incorporated Cities, 222
 Trains, Speed of, in a City, 797
 Train Wreckers, Statute Against, 238
 Trespassers on a Locomotive, 126
 Trustees and Receivers, Fees of, 654
 Wrongful Detention—Liability for, Baggage, 286

GENERAL RAILROAD NEWS.

Addison & Northern Pennsylvania, 63, 159
 Akron & Fort Wayne, 302
 Alabama & Georgia, 542
 Alabama, New Orleans, Texas & Pacific Junction,
 671
 Albany & Susquehanna, 335
 Albany & Raleigh, 97, 702, 813
 Alexandria & Fredericksburg, 382
 Algona, Belmond & Northern, 159
 Allegheny Valley, 415
 Amundsen & Bates, 463
 American Institute of Mining Engineers, 61, 317, 540
 American Society of Civil Engineers, 300, 380, 412,
 417
 American Street Railway Association, 652, 694
 American Ticket Brokers' Association, 333
 American Train Dispatchers' Association, 189, 413
 American, Preston & Lumpkin, 135, 265, 367, 415, 493,
 509, 627, 765
 Amsterdam & Saratoga Springs, 445
 Anderson, Lebanon & St. Louis, 319
 Angles, 46, 525
 Annapolis & Baltimore Short Line, 718
 Annapolis & Elkhridge, 558, 573
 Annapolis & Elkhridge Foreclosure Sale, 732
 Annapolis & Atlantic, 477
 Annapolis & Axtell, 63
 Annapolis & Chattanooga, 143, 174
 Annapolis & Northern, 110
 Appoka & Atlantic, 415, 829
 Appoka & Baltimore, 159
 Arkansas & Grand Prairie, 415
 Aroostook Central, 509
 Artesia, Starkville & Grenada, 319
 Ashtaburnham, 222
 Asheville & Spartanburg, 70, 110, 302, 350, 462, 590,
 702, 780, 813
 Association of American Railroad Superintendents,
 253, 259
 Association of Railway Telegraph Superintendents,
 348
 Atchison, Topeka & Santa Fe, 31, 63, 79, 207, 238, 255,
 271, 303, 397, 415, 463, 509, 520, 573, 635, 654,
 672, 686, 718, 780, 813, 829
 Atlanta & West Point, 462
 Atlanta & Danville, 31, 718
 Atlantic & Great Western, 749, 765
 Atlantic & North Carolina, 63, 382, 415
 Atlantic & Northwest, of Canada, 637
 Atlantic & Northwestern, 67
 Atlantic & Pacific, 15, 350, 499, 558, 605, 749
 Augusta, Gibson & Sandersville, 66, 111, 205, 429, 493,
 573, 654
 Augusta & White Plains, 462
 Austin & Northwestern Foreclosure Sale, 41, 142,
 830
 Bale Chaleur, 593
 Baltimore & Ohio, 15, 31, 45, 95, 143, 159, 174, 190, 222,
 235, 255, 303, 319, 350, 367, 382, 396, 415, 429, 445, 462,
 493, 509, 520, 542, 606, 622, 686, 702, 718, 734, 749, 765,
 780, 797, 813
 Baltimore & Ohio Employees' Relief Association, 77,
 157, 193, 205, 355, 413, 490, 544, 590, 671
 Baltimore & Ohio and the Pennsylvania, 637
 Baltimore & Potomac, 415, 493, 780
 Bangor & Piscataquis, 207, 718, 734, 797
 Bangor & Portland, 542, 629
 Barton County, 159
 Bates Hill & Brinkley, 493, 688
 Bayfield Harbor & Great Western, 672
 Bedford & Bridgeport, 389
 Beech Creek, Cedar Rapids & Southwestern, 95, 429, 462,
 493, 509, 558, 622, 749, 780, 813

Belvidere Delaware, 180, 542
 Bloomfield, 236, 477
 Blue Springs, Orange City & Atlantic, 415, 477
 Boston & Albany, 79, 126, 207, 303, 526, 672, 749, 797
 Boston & Albany Station Agents' Association, 306
 Boston, Barre & Gardner, 149, 174, 280, 303
 Boston, Housatonic & Western, 31, 143, 319, 542,
 749
 Boston & Lowell, 31, 91, 190, 223, 239, 271, 287, 335,
 352, 369, 403, 509, 542, 622, 635, 654, 672, 780, 797, 813
 Boston & Maine, 15, 111, 174, 355, 356, 724, 749, 766,
 780, 797, 813
 Boston, Revere Beach & Lynn, 46
 Boulder & Denver Air Line, 111
 Bradford & Kalamazoo, 63, 393, 781
 Bradford, Kidder & Cuba, 15, 111, 287, 477, 696
 Branchport & Penn Yan, 207
 Brooklyn, Bath & Coney Island, 95
 Brooklyn, Bath & Coney Island Foreclosure Sale,
 285
 Brooklyn Elevated, 319, 399
 Brooklyn & Long Island Cable Co., 468
 Brookville, 319
 Brotherhood of Locomotive Engineers, 109, 476, 701
 Brotherhood of Locomotive Firemen, 443, 621, 636
 Brotherhood of Railroad Brakemen, 701
 Brunswick & Western, 174, 638
 Buckingham, 393
 Buena Vista, 111
 Buena Vista & Ellipse, 402
 Buffalo, New York & Philadelphia, 63, 95, 111, 125,
 143, 159, 223, 335, 397, 382, 396, 462, 435, 499, 520,
 542, 573, 654, 672, 686, 718, 734, 749, 797
 Bureau of Northern, 319
 Burlington, Cedar Rapids & Northern, 70, 111, 319,
 718
 Burlington & Northwestern, 111
 Burlington & Western, 15
 Cadillac, Manistee Valley & Lake Michigan, 46
 Cadillac & Northeastern, 558
 Cairo, 239
 Cairo, Vincennes & Chicago, 367, 542, 747
 Calabasas, Tucson & Northwestern, 255, 350
 Calhoun, Sac City & Dakota, 126
 California & Nevada, 239
 California Southern, 15, 31, 63, 126, 143, 287, 382, 429,
 598, 573, 599, 616, 702, 718, 734, 749
 Calumet River, 223
 Camden & Atlantic, 70
 Camden, Gloucester & Mt. Ephraim, 319, 418
 Canada Atlantic, 126
 Canada, La Crosse & Southwestern, 143
 Canada Southern, 702, 731
 Canadian Pacific, 126, 180, 207, 223, 303, 319, 335, 367,
 396, 445, 454, 530, 560, 622, 635, 651, 672, 686, 718,
 731, 749, 797
 Canton & St. Lawrence River, 15
 Cape Fear & Yadkin Valley, 368, 191, 207, 287, 590
 Cape Girardeau & Northwestern, 335, 573, 718, 781
 Car Accountants' Association, 317, 380, 397, 421, 658
 Carquest, 606
 Carversville, 638
 Carolina Central, 126, 207, 606, 638
 Carson & Colorado, 402, 526
 Cattle King, 367
 Central Association of Railroad Superintendents,

GENERAL RAILROAD NEWS.

- Denver, Marshall & Boulder, 734
 Denver, Memphis & Atlantic, 634, 829
 Denver & N. W. Orleans, 367, 573
 Denver & Rio Grande, 111, 233, 255, 271, 287, 303, 319, 331, 367, 383, 399, 462, 478, 494, 510, 526, 573, 622, 749, 814, 830
 Denver & Rio Grande Western, 111, 159, 491, 500, 628, 718, 789, 797, 814
 Denver, Texas & Gulf, 718
 Denver, Utah & Pacific, 239, 702
 Des Moines, Osceola & Southern, 238, 255, 830
 Detroit, Bay City & Alpena, 590, 622
 Detroit, Grand Haven & Milwaukee, 510
 Detroit & St. Clair, 363
 Dividends, 14, 29, 44, 61, 77, 93, 108, 124, 142, 157, 173, 189, 205, 221, 237, 253, 269, 285, 300, 317, 333, 349, 365, 380, 396, 412, 428, 443, 460, 476, 492, 508, 524, 540, 556, 572, 588, 604, 621, 636, 652, 664, 701, 716, 732, 747, 764, 779, 811, 828
 Dublin & Wrightsville, 308, 634, 697
 Dubuque & Dakota, 3-5
 Dubuque & North Western, 319, 399, 494, 542, 750, 761
 Dubuque & Sioux City, 191, 399, 494, 542, 750, 761
 Duluth, Ada & Northern Dakota, 415, 510
 Duluth & Manitoba, 703
 Duluth & Northern, 636
 Duluth & Winnipeg, 255
 Dunkirk, Allegheny Valley & Pittsburgh, 542
 Durango, Fort Lewis & Western, 111
 Durham & Charlotte, 237
 Eastern, 287, 335, 797, 814
 Eastern Heights, 6-8
 Eastern Michigan, 462
 East Florida Land Co., 335
 East Georgia & Florida, 638
 East River Turned, 141
 East Tennessee, Virginia & Georgia, 15, 31, 46, 63, 79, 95, 109, 124, 239, 255, 271, 287, 303, 319, 331, 349, 365, 380, 396, 412, 428, 443, 460, 476, 492, 508, 524, 540, 556, 572, 588, 604, 621, 636, 652, 664, 701, 716, 732, 747, 764, 779, 811, 828
 Ellsworth, Great Bend & Western, 175
 Ellsworth, Lee Heron, Newton & Southeastern, 383, 415, 510
 Elmira, Cortland & Northern, 333, 622
 El Paso, St. Louis & Chicago, 814
 Emporia & Southwestern, 462
 Englewood, Conestoga, 252, 542
 Erie & Wyoming Valley, 634
 Evansville & Indianapolis, 735
 Evansville & Terre Haute, 446, 478, 638
 Evansville, Washington & Brazil, 27, 351, 558, 592, 606, 780
 Eureka & El River, 431
 European & North American, 462
 Evansville, 223, 491, 634
 Fairmont & Gaston, 239
 Fairmont, Morgantown & Pittsburgh, 126, 693, 707
 Fall Brook Coal Co., 750
 Fargo, Moorhead & Northwestern, 542
 Fargo & Southern, 394, 446
 Fargo Falls & Southwestern, 351
 Fitchburg, 151, 175, 223, 319, 323, 839
 Florida Midland, 271
 Florida Railway & Navigation Co., 32, 63, 159, 351, 418
 Florida Southern, 90, 363, 351, 494, 542, 651, 830
 Fond du Lac, Johnstown & Gloversville, 353
 Foreclosure Sales, 41, 61, 77, 100, 142, 180, 235, 253, 269, 285, 300, 317, 333, 349, 365, 380, 396, 412, 428, 443, 460, 476, 492, 508, 524, 540, 556, 572, 588, 604, 621, 636, 652, 664, 701, 716, 732, 747, 764, 779, 811, 828
 Fort Benton, 828
 Fort Bragg, 335
 Fort Madison & Northwestern, 175, 207, 239, 308
 Fort Mass in Seneca, St. Johns River, 839
 Fort Scott & Lincoln, 415
 Fort Smith, Wellington & Northwestern, 333
 Fort Worth & Denver, 223, 237, 253, 269, 285, 300, 317, 333, 349, 365, 380, 396, 412, 428, 443, 460, 476, 492, 508, 524, 540, 556, 572, 588, 604, 621, 636, 652, 664, 701, 716, 732, 747, 764, 779, 811, 828
 Fort Worth & New Orleans, 402, 558, 672, 750
 Fort Worth & Rio Grande, 3-3
 Fort Worth, Waxahachie & Sabine Pass, 383, 390
 Franklin & Megantic, 750
 Freeport, Ironton, Mauston & Northern, 512
 Fremont, Elkhorn & Missouri Valley, 79, 239, 355, 351, 385, 390, 428, 446, 478, 638
 Gainesville & Dahlonega, 159
 Gainesville, Lecon & Chicago, 207
 Galveston, Sabine & St. Louis, 159, 239, 573
 Gaston, 191
 General Baggage Agents' Association, 77, 476
 General Time Convention, 670
 Georgia Associated Traffic Lines, 47
 Georgia Harbors Co., 32
 Georgia Midland & Gulf, 416, 478, 510, 526, 622
 Georgia Pacific, 90, 363, 351, 494, 542, 651, 830
 Georgia Railroad Commission, 606, 622
 Gogebic & Lake Superior, 814
 Golden Belt & Gulf, 462
 Goldsboro, Snow Hill & Greenville, 388
 Grand Rapids, Centralia & Varsheid, 271
 Grand Rapids & Indiana, 144, 219, 686, 763
 Grand Trunk, 77, 191, 255, 287, 351, 399, 430, 462, 573, 606, 622, 703, 749, 814
 Great American & European Short Line, 191, 351, 446
 Great Southern, 159
 Green Bay & Northern, 351
 Green Bay, Winona & St. Paul, 90, 207, 223
 Green Cove Spring & Midland, 558
 Green Cove Spring & Midland, 558
 Greenville & Laurens, 63, 388, 830
 Greenwood, Laurens & Spartanburg, 111, 446, 501
 Gulf, Colorado & Santa Fe, 416, 478, 510, 526, 622, 703, 749, 814
 Hancock & Calumet, 120, 719
 Hannibal & St. Joseph, 90, 111, 144, 668
 Hancock Junction, Atlantic & Gettysburg, 383, 797
 Hartford & Harlem, 271
 Hastings & Grand Island Foreclosure Sale, 413
 Hayward & Southern, 319
 Herkimer, Newport, Poland, 63
 Highland Junction, 111, 271, 319
 Holden, Clinton & Southern, 10
 Hopkinsville & Paducah, 239
 Houston, 415, 462, 510, 526
 Houston, East & West Texas, 339, 351, 462, 542, 573, 606, 622, 703, 749, 814
 Houston & Texas Central, 32, 63, 159, 183, 144, 191, 223, 255, 319, 355, 351, 478, 542, 573, 622, 634, 735, 781, 814
 Hudson Bay, 936
 Hutchinson, Glenwood & Southern, 707
 Huntington, Teel City & Canby, 750
 Illinois Central, 147, 115, 191, 223, 271, 308, 494, 573, 591, 638, 672, 681, 735, 750, 761
 Illinois Midland, 16, 271, 314, 568
 Indiana, Alabama & Texas, 27, 351, 558, 592, 606, 780
 Indiana, Bloomington & Western, 13, 159, 175, 191, 223, 255, 319, 355, 351, 478, 542, 573, 622, 634, 735, 781, 814
 Indiana & Illinois Southern, 16, 32, 96, 161, 223
 Indianapolis, Decatur & Springfield, 63, 191, 223, 309, 634, 672
 Indianapolis, El River & Southeastern, 3-9, 462
 Indianapolis, Peru & Chicago, 703, 718, 750
 Indianapolis & Vincennes, 32, 63, 781
 Indianapolis Train Dispatchers' Association, 779
 Intercolonial, 297, 491, 510, 526, 622
 International P. Elevated, 443
 International, 399, 789
 International Association of Traveling & Passenger Agents, 390, 443
 International of Maine, 80, 111, 751
 International Tramway Union, 604
 Interstate, 365
 Iowa Railroad, 763
 Iron, 229, 462, 750
 Ishpeming, L'Anse & Ontonagon, 47
 Jacksonville & Atlantic, 492, 719
 Jacksonville & Montgomery, 297
 Jacksonville, Jacksonville & Halifax River, 271
 Jacksonville, Tampa & Key West, 303, 430, 574, 651, 703, 750, 780, 830
 James River Valley, 47, 606, 654, 630, 750, 781
 Jamestown & Northern, 730
 Jamestown & Buffalo, 730
 Jamestown & Franklin, 63
 Jamestown & Washington, 81
 Joliet, Aurora & Northern, 308, 686, 814
 Jonesboro, 491
 Juneau, Minnesota Junction & Milwaukee, 175
 Kanawha, 351
 Kanawha & El River, 32
 Kansas & Arkansas Valley, 781
 Kansas City Belt, 230, 430
 Kansas City, Clinton & Springfield, 175, 255, 430, 416, 494, 703, 750, 780, 830
 Kansas City & Osceola, 80
 Kansas City & Southern, 47, 319, 446, 574
 Kansas City & Southwestern, 390, 536, 638, 672, 781
 Kansas City, Springfield & Memphis, 175
 Kansas City, Topeka & North Western, 144
 Kansas City, Wichita & Indian Territory, 30
 Kansas City, Wyandotte & Northwestern, 791
 Kansas & Gulf Short Line, 111, 255, 494, 510, 703, 751, 814
 Kansas, Nebraska & Dakota, 638, 636
 Kansas Railroad Subsidies, 830
 Kansas Western, 308
 Kentucky Central, 230, 308, 383, 446
 Kentucky & South Atlantic, 542
 Kentucky Union, 308, 623
 Lake Erie & Western, 111, 223, 255, 267, 335, 368, 383, 415, 462, 542, 574, 606, 622, 703, 750
 Lake Erie & Western, 111, 223, 255, 267, 335, 368, 383, 415, 462, 542, 574, 606, 622, 703, 750
 Lake Michigan & Ohio River, 856
 Lake St. John, 634
 Lake Shore & Michigan Southern, 47, 175, 209, 223, 335, 491, 572, 638
 Lake Superior & Southwestern, 626
 La Motte & Pierre, 681
 Lansing, Alma, Mt. Pleasant & Northern, 672, 719
 Leadville, South Park & Leadville, 319
 Leavenworth Northern & Southern, 719
 Lebanon Springs Foreclosure Sale, 300, 380
 Len's Creek & Coal River, 719
 Leroy & Cane Valley, Air Line, 446
 Lehigh Coal & Navigation Co., 144
 Lehigh & Hudson River, 478, 814
 Lehigh Valley, 47, 175, 271, 591
 Little Rock & Fort Smith, 111, 126, 175, 191, 223, 303, 335, 491, 572, 638
 Little Rock, Mississippi River & Texas, 126, 446, 706
 Little Rock, 750
 Los Angeles & San Gabriel Valley, 491, 596, 623, 719, 751
 Long Beach, 208
 Longdale Iron Co., 654
 Long Island, 47, 159, 209, 303, 544, 736, 797, 814
 Lookout Mountain, 574
 Louisiana Central, 638
 Louisville, Evansville & St. Louis, 32, 47, 111, 144, 175, 209, 223, 335, 368, 383, 415, 462, 542, 574, 606, 622, 703, 750
 Louisville & Nashville, 32, 47, 64, 83, 111, 175, 209, 223, 255, 267, 335, 368, 383, 415, 462, 542, 574, 606, 622, 703, 750
 Louisville, New Albany & Chicago, 558, 814
 Louisville, New Orleans & Texas, 47, 64, 126, 209, 223, 255, 319, 355, 351, 478, 542, 573, 622, 634, 735, 781, 814
 Louisville Southern, 672
 Macon & Covington, 672, 781
 Macon & Dublin, 223, 335, 416, 526
 Mail Service Extensions, 100, 701
 Maine Central, 32, 83, 339, 60, 6, 703, 719
 Maine Railroad, 239
 Maine Shore Line, 591
 Mammoth Cave, 554
 Manassas, 127, 175, 239, 319, 368, 543, 735, 781
 Manitoba & Fort Union, 681
 Manitoba & Northwestern, 430, 735
 Main Boudier Car Co., 250
 Marquette & Phoenix, 271
 Marquette Mineral, 16, 209, 383, 830
 Marquette & North Georgia, 747
 Marquette, Houghton & Ontonagon, 159, 175, 271, 335, 491, 572, 638
 Marshall & Northwestern, 144, 251, 490, 686, 750, 797
 Martin's Creek, 319
 Maryland Central, 335
 Massachusetts Railroad Commission, 684
 Massachusetts Railroads, 47
 Massachusetts Springs & Wilmington, 574
 Master Car Builders' Association, 363, 374, 385, 402
 Master Car Builders' Club, 100, 173, 636, 732
 Master Car Builders' Meeting, 1, 251
 Master Car Patrons' Association, 339, 492, 693
 Master Mechanics' Association, 253, 441, 401
 Meetings, 14, 29, 44, 30, 77, 93, 108, 124, 141, 157, 173, 189, 205, 221, 237, 253, 269, 285, 300, 317, 333, 349, 365, 380, 396, 412, 428, 443, 460, 476, 492, 508, 524, 540, 556, 572, 588, 604, 621, 636, 652, 664, 701, 716, 732, 747, 764, 779, 811, 828
 McHenry Valley, 191
 Memphis, Birmingham & Atlantic, 750
 Memphis & Charleston, 47, 175, 191, 223, 255, 319, 355, 351, 478, 542, 573, 622, 634, 735, 781, 814
 Memphis, Oxford & Columbus, 574
 Memphis, Selma & Brunswick, 16, 111, 256, 335, 416, 510, 543, 686
 Merrill & Cronwell, 240
 Merrill & Abbottford, 706
 Mexican Central, 47, 127, 144, 208, 223, 271, 308, 399, 415, 462, 542, 574, 606, 622, 703, 750, 781, 814
 Mexican Meridians, 1, 399
 Mexican National, 33, 335, 351, 494, 542, 651, 830
 Mexican Railroad Notes, 47, 64, 111, 127, 141, 159, 175, 191, 223, 255, 267, 335, 368, 383, 415, 462, 542, 574, 606, 622, 703, 750, 781, 814
 Michigan Central, 47, 96, 159, 383, 430
 Michigan Engineering Society, 100
 Michigan & Ohio, 351, 446, 623, 708
 Midland, 144, 219, 686, 763
 Midland of Indiana, 446, 494, 558, 655, 686, 735, 750
 Midland North Carolina, 478
 Midland, of South Carolina, 83
 Milton & North Mountain, 706
 Milwaukee & Dubuque, 815
 Milwaukee, Lake Shore & Western, 10, 144, 191, 440, 494, 803
 Milwaukee, Menomonee Falls & Western, 703
 Milwaukee & Northern, 591
 Milwaukee, Jackson & Columbus, 433
 Milwaukee & St. Louis, 735
 Minden Branch, 830
 Minneapolis & Pittsburgh, 233
 Minneapolis, St. Louis & St. Marie & Atlantic, 210, 271, 319, 446, 543, 558, 639, 683, 815
 Minneapolis, Lyndale & Minnetonka, 383, 446, 543
 Minneapolis & Northern, 335, 368, 686
 Minnesota & Northern, 335, 368, 686
 Minnesota Central, 47, 64, 111, 127, 141, 159, 175, 191, 223, 255, 267, 335, 368, 383, 415, 462, 542, 574, 606, 622, 703, 750, 781, 814
 Minnesota Railroad Law, 96, 159
 Mineral Range, 475
 Mississippi River, 80
 Mississippi & Tennessee, 127, 255
 Missouri, Iowa & Nebraska, 446, 538, 639, 706
 Missouri, Kansas & Texas, 175
 Missouri Pacific, 144, 219, 686, 763
 Missouri Pacific, 144, 219, 686, 763
 Missouri Pacific in Kansas, 623
 Missouri Railroads, 446
 Mitchell, Orleans, Paoli, West Baden & French Lick, 368
 Mobile & Ohio, 111, 175, 383, 400, 430, 446, 469, 639, 781, 815, 830
 Mobile & West Alabama, 47, 223
 Montague & Southwestern, 798
 Montgomery Southern, 64
 Montpelier & Wells River, 63
 Montreal, Portland & Boston, 47, 64, 338, 319, 383, 735
 Montreal & Sorel, 574
 Morgan's Louisiana & Texas, 32
 Mount Carbon, 368
 Mount Holly & Denver, 240
 Mount Pleasant & Atlanta, 545
 Mount Vernon, Cohasset & Wheeling, 80
 Napanee, Tanawago & Quebec, 703
 Nashville, Chattanooga & St. Louis, 64, 114, 208, 272, 319, 351, 416, 433, 478, 543, 591, 623, 703, 706, 781, 830
 Nashville & Knoxville, 368
 Natchez, Jackson & Columbus, 433
 Natchez, Red River & Texas, 80
 National Association of General Passenger and Ticket Agents, 142, 205, 211, 540, 593
 National Railroad Agents' Association, 300, 764
 Nebraska, Kansas & Pan-handle, 273
 Nebraska & Lake Superior, 90
 Nevada Central, 319
 Nevada Central, 319
 New Brunswick, 400
 New Castle North, 240
 New England Railroad Club, 44, 160, 180, 212, 508, 634, 681, 728, 735
 New England Roadmasters' Association, 636
 New England & Southern Construction Co., 606
 New England & Southwestern, 735, 708
 New Hampshire Railroad, 478
 New Jersey Railroad Taxation, 14, 719, 735
 New London Northern, 574
 New Orleans & Northeastern, 672, 703
 Newton, Walnut Valley & Denver, 338
 New York Arcade, 386
 New York & Boston Dining Car, 686
 New York & Boston Inland, 32, 47, 64
 New York Central & Hudson River, 16, 47, 111, 137, 144, 175, 192, 240, 288, 319, 400, 416, 430, 526, 543, 606, 672, 719
 New York Central and the Pennsylvania, 478, 494
 New York Central Sleeping Car Co., 731, 815
 New York, Chicago & St. Louis, 112, 160, 208, 223, 240, 256, 272, 288, 303, 316, 398, 383, 400, 416, 440
 New York & Council Bluffs, 144, 625
 New York, Fordham & Bronx, 738
 New York, Lake Erie & Western, 10, 32, 48, 80, 94, 112, 127, 190, 175, 192, 208, 224, 303, 320, 336, 351, 383, 400, 416, 510, 526, 543, 574, 606, 622, 634, 652, 672, 686, 706, 738, 815, 830
 New York & Manhattan Beach, 558
 New York & New England, 10, 32, 80, 93, 112, 160, 176, 192, 208, 224, 303, 320, 336, 351, 383, 400, 416, 440, 478, 510, 526, 543, 574, 606, 622, 634, 652, 672, 686, 706, 738, 750, 767, 781, 798, 815, 830
 New York, New Haven & Hartford, 112, 256, 320, 527, 686, 703, 767
 New York, Ontario & Western, 112, 288, 351, 400, 543, 574, 672, 707, 830
 New York, Pennsylvania & Ohio, 400, 493, 478, 510, 543, 591, 672, 686, 703
 New York, Pittsburgh & Chicago, 240, 430, 447
 New York, Providence & Boston, 781, 798
 New York, Rutland & Montreal, 510
 New York & Sea Beach, 929
 New York, Susquehanna & Western, 10, 32, 61, 144, 192, 240, 251, 447, 463, 707
 New York, Texas & Mexican, 574
 New York, Utica & Buffalo, 48, 96, 176, 192, 208, 224, 303, 320, 336, 351, 383, 400, 416, 440, 478, 510, 526, 543, 574, 606, 622, 634, 652, 672, 686, 706, 738, 750, 767, 781, 798, 815, 830
 New York, West Shore & Buffalo Foreclosure Sale, 652, 764
 Niagara Central, 719
 North Carolina Charters, 192
 North Carolina, 112, 144, 221, 288, 351, 416, 430, 491, 574, 639, 703, 719, 767, 782, 798
 North Conway & N. Kearsarge, 256, 303, 400, 719
 Northwestern of Georgia, 430
 Northern Aroostook, 410
 Northern Central, 16, 48, 90, 127, 141, 160, 208, 224, 238, 351, 400, 416, 430, 491, 574, 639, 703, 719, 767, 782, 798
 Northern (New Hampshire), 48, 64, 80, 122, 208, 240, 256, 702
 Northern Pacific, 10, 32, 64, 93, 112, 144, 176, 240, 288, 319, 383, 395, 400, 416, 430, 491, 574, 639, 703, 719, 767, 782, 815, 830
 North Pacific Coast, 686
 North Shore, 192, 258, 400, 607, 693
 Northwest Chicago & St. Paul, 703
 Norwich & Worcester, 96, 127, 719
 Oakland & Colby, 707
 Ogdenburg & Lake Champlain, 32, 48, 112, 127, 160, 336, 340, 703
 Ohio Central, 112, 190, 192, 303, 335, 368, 430, 543, 558, 639, 719, 782
 Ohio Central Foreclosure Sale, 100, 253, 684, 701
 Ohio Falls, French Creek & Terre Haute, 697
 Ohio & Mississippi, 16, 384, 400, 416, 430, 478, 510, 541, 591, 655, 672, 686, 719, 767, 782, 830
 Ohio River & Lake Erie, 430
 Ohio Valley, 48, 655, 672, 750
 Oil Colony, 32, 93, 141, 208, 240, 384, 400, 430, 607, 634, 655
 Olmsted, Abilene & Lake Erie, 460
 Omaha, Abilene & Wichita, 468
 Omaha Belt, 527, 559
 Omaha & Elkhorn Valley, 782
 Omaha & North Platte, 719
 Omaha & North Platte, 680
 Onset Bay, 463, 639
 Orange Belt, 394
 Order of Railway Conductors, 413, 701
 Oregon & California, 41, 64, 80, 241, 253, 304, 320, 430, 467, 639, 703
 Oregonian, 208, 256, 304
 Oregon Inland, 112, 190, 208, 240, 336, 384, 478, 527, 574, 623, 735, 798, 815
 Oregon Pacific, 10, 32, 44, 160, 256, 288, 340, 346, 363, 478, 493, 571, 607, 638, 656, 703, 719, 733, 782, 798
 Oregon & Transcontinental Co., 1d, 288, 510, 527, 719, 782, 798
 Orleans, Paoli & Jasper, 453
 Osage Valley, 336
 Ottawa, St. Lawrence & Schenectady, 112
 Ottawa, Waddington & New York, 686
 Oxford & Cleveland, 112
 Pacific Mail Steamship Co., 256, 272
 Pacific of Missouri, 176
 Pacific Railroads and the Government, 782
 Paintersville & Port Pender, 112
 Palatka, Ocala & Homosassa, 758
 Palisades, 750
 Passaic & New York, 655, 815
 Park Point, 256, 304
 Pennsylvania, 10, 48, 90, 112, 127, 144, 160, 176, 208, 224, 240, 256, 272, 288, 303, 316, 398, 383, 400, 416, 440, 478, 510, 526, 543, 574, 606, 622, 634, 652, 672, 686, 706, 738, 750, 767, 781, 798, 815, 830
 Pennsylvania & the Baltimore & Ohio, 637
 Pennsylvania & Martin's Creek, 384, 527
 Pennsylvania & the New York Central, 478, 494
 Pennsylvania, Slatton & New England, 384, 555, 704
 Pensacola & Atlantic, 32, 782
 Pensacola & Memphis, 208
 Peoria Terminal, 144
 Petersburg, 16
 Philadelphia & Chester County, 127
 Philadelphia & Chester County Foreclosure Sale, 293
 Philadelphia & Erie, 112
 Philadelphia & Midland, 447
 Philadelphia, Newton Square & Chester, 782
 Philadelphia, Reading & Port Pender, 112
 127, 144, 160, 176, 192, 208, 224, 240, 256, 272, 288, 303, 316, 398, 383, 400, 416, 440, 478, 510, 526, 543, 574, 606, 622, 634, 652, 672, 686, 706, 738, 750, 767, 781, 798, 815, 830
 Pine Bluff & Swan Lake, 767
 Pittsburgh, 176, 330
 Pittsburgh, Charters & Youghiogheny, 163
 Pittsburgh, Cincinnati & Erie, 416, 430, 478, 510, 541, 591, 655, 672, 686, 719, 767, 782, 830
 Pittsburgh, Fort Wayne & Chicago, 48, 64, 80, 192, 331, 617
 Pittsburgh & Lake Erie, 112, 127, 431, 573, 735
 Pittsburgh, McKeesport & Youghioghen

GENERAL RAILROAD NEWS.

Wisconsin Central 61, 80, 90, 192, 230, 384, 447, 471,
495, 544, 559, 575, 623, 655, 667, 720, 723, 767, 798
Wisconsin, Iowa & Nebraska, 400, 544, 623
Wisconsin Railroad, 64
Wisconsin Railway & Navigation Co., 400
Wolf & Wisconsin Rivers, 607, 623
Worcester, Nashua & Rochester, 224, 623, 640, 85
724, 726, 761, 798, 816
Wrights Isle & Ten Isle, 90, 144
Wyandotte, Nebraska, 192
Yenia & Southern, 192
Yadkin, 551
Yardmasters Mutual Benefit Association, 360, 368
Yonkers and Southwestern, 112
Zanesville & Cincinnati, 192
Zanesville, McConnellsville & Pomeroy, 353

MISCELLANEOUS.

Erie, *See* Railroad, *See* Management of, 129
 Erie, Old, Belles of, 8, 3
 Erie Shops, Notes at, 714
 Esthetic Traveling, 293
 Estimating the Speed of the Train, 263
 Estimating the Speed and Accurateness of the
 Measurement of the Movement by Water Power, 129
 Excursions, New Idea in, 141
 Explosion at Flood Rock, 504
 Explosive, New, 581
 Fast East, Railroad to the, 412
 Fast Freight Train, 485, 571
 Fast "Limited" Trains, 373
 Fast Railroading in '49, 117
 Fast Run, 675
 Fastest Run Ever Made, 564
 Fast Time, 268, 310, 342, 364, 380, 413, 428, 443, 486,
 536, 584, 638, 670, 752
 Fastest Time on Record, 437
 Fast Time on the Water, 380
 Fast Trains, English and American, 273
 Fast Trip, Old Time, 589
 Fay's Large Car Tronining Machine, 567
 Ferry Transfer, Portland, Oregon, 498
 Financiering, 443
 Fink, Mr., on the West Shore Purchase, 561
 Flagging Detained Trains, 161
 "Finance" '38
 Flooring Machine, Woods' Fast Feeding, 408
 Fluctuations of Rainfall and Floods, 373
 Flying Locomotive—accident at Concord, 979
 French Transfer, Portland, 498
 Freight Locomotive, Last of the, 36
 Forgings, Large, 716
 Foreign Railroad Notes, 13, 188, 261, 235, 251, 283,
 293
 Foreign Technical Notes, 400, 408, 522, 531, 553, 567,
 619
 For Spot Cash, 413
 Foster's Compressed Gas System, 561
 Found One, 354
 France and England, Railroad Superstructure in,
 304
 France, Railroad Extension as a Question of Politics,
 705
 France, Railroad Policy in, 441
 Fraud, Attempted, 743, 759
 Freight Car Brakes and Standard Freight Car
 Trucks, 571
 Freight Car Truck, Proposed Standard, 404
 Freight Train Brakes, Automatic, 709
 Freight Trains, Eames Vacuum Brakes for, 810
 French Transfer, Portland, 498
 Friction, Journal, Apparatus for Testing in a Lathe,
 330
 Frog, German, for Factory Sidings, 579
 Frog, Main Track, 412
 Frogs in a Guard Rail, Protecting, 77
 Frogs, Prices of, 108
 From Boston, 182
 From the French, 18
 Fried Out-look, 759
 Fuel, Economy in, 77
 Fuel Economy on English Railroads, 205
 Fuel, Liquid, in California, 759
 Fuel, Locomotive, of Solid and Fluid, 423
 Furnace Record, Excellent, 475
 Gairret, Mr., Estate, 427
 Garretts Journal Box Jack, 593
 Gas-braining Furnaces, Regulator for, 47
 Gas, Compressed, Pintach System, 108, 368
 Gas Explosion, 304
 Gas, Natural, Appliance for Control of, 508
 Gauge, Coal, 5 ft 6 in. for Solid and Fluid, 423
 Gauge, Cost of Change of, 716, 732
 Geography According to the Philadelphia Times,
 679
 Geography, Local, A Little Out in, 727
 Germany, Cost of Carriage by Rail and Canal in, 513
 Germany, Questions Concerning Train, in, 156
 Germany, Railroad Policy in, 532
 Getting Even With the Conductor, 331
 Gibson, Railroad, 633
 Giant Hydraulic Jack, 738
 Give It a Fair Show, 106
 Glasgow & Southwestern Passenger Locomotive
 615
 Gould & Eberhardt's Machinists' Emery Tool Grinders,
 787
 Gould & Eberhardt's New 30-Inch Drill Press, 578
 Gould & Eberhardt's Swing Engine Lathe, 458
 Government Railroad Ownership, Results of, 538
 654
 Grade Crossings, Highway, in Massachusetts, 453
 Grade, Tunnel System of, Weighing, 629
 Grain Rail, President of the Chicago, Burlington
 & Quincy on Reduction of, 70
 Grand Central Depot, New York, Interlocking Sig-
 nals and Switches, 161
 Grand Track Meeting, Sir Henry Tyler's Speech at,
 805
 Growth in the West, 203
 Guard-rail, standard, Pennsylvania Railroad, 87
 615
 Guatemala, Railroads in, 141, 264
 Hall's Subaqueous Tunneling Device, 244
 Hammer, Robson's Gas, 483
 Hastening to his Death, 759
 Heating and Ventilating Cars, 60, 561
 He Jumped, 235
 Henry's Tilting Cushion Car Seat, 562
 Her First Ride, 265
 Hermit, Cleaning Out a, 707
 He Took the Chances, 453
 He Wanted to Get Back, 603
 He Wanted the Seat, 703
 Hire of Cars, Basis for, 513
 His Recollection Was Confirmed, 679
 Hoisting Engines, Alderwood, 178
 Honduras, Railroads in, 567
 Ho-was Tunnel, 567
 Hopper System of Weighing Grain Transferred
 from Car to Car, 620
 Hospital, Robert A. Packer, 310, 459
 How He Contrived a Traffic Manager, 460
 How "They" Do these Things Better in France,
 560
 Hydraulic Boiler Tests, 603
 Hydraulic Jack, The Giant, 738
 Imagination, 30
 Inclines, Steep, Abut System for Working, 891
 Indicator Diagrams, Cincinnati, New Orleans
 Texas Pacific, 1
 Inauguration, President, Speech at the Chicago Meeting,
 241
 In Georgia, 331
 Infernal Machine on the Railroad, 13
 Infernal, Automobile, He Starting, 84
 Injunction Suit, Speculating on, 794
 Innocent Inventor, 501
 In the Depot, 512, 590, 485, 539
 In the Sleeping Car, 513
 In the Smoking Car, 827
 Institution of Civil Engineers, 963
 Interchange of Cars, Revised Rules for, 435, 520
 Interlocking Traffic, Present General Conditions
 of Freight Cars for, 185
 Interlocking, Progress of, 742, 748
 Interlocking Switch and Signal Connection, 556
 Interlocking Switch and Signal System, Speed of,
 605
 International Episode, 284
 International Railroad Congress in Brussels, 468
 Inventions Exhibition, London, Machine Tools at,
 537
 Inventor with Confidence in Human Nature, 459
 Irish Sheriff Train, 269
 Iron (Cast) Sleepers, 564
 Iron Wire, Car, 220

MISCELLANEOUS.

- Iron, Metallurgy of, New Departure, 636
Iron, Notes, 6, 21, 35, 60, 77, 81, 107, 151, 140, 148, 166
(See Iron and Steel)
Iron, Pig, Production in 1894, 194
Iron Pipes, 743
Iron Sleepers, Water-proof Joint for, 338
Iron Sleepers, Manufacture of, in England, 759
Iron Sleepers on a Street Railroad, 747
Iron and Steel, 181, 204, 220, 236, 252, 261, 284, 296, 310, 334, 318, 761, 773, 785, 412, 422, 442, 459, 475, 491, 500, 520, 530, 536, 567, 581, 597, 619, 655, 645, 670, 695, 715, 732, 747, 764, 773, 794, 810, 827
Iron and Steel Production in 1895, 491
Iron Telegraph Poles, 476
Iron Trade, American, in 1894, 21
Iron Trade, Pittsburgh, 21
Iron Trade and Railroad Rates, 412
Italy, Underground Railroads in, 491
Item in Prospect, 529
It Jarred Out Her Hairpins, 759
It Was Loaded, 331
Jervia, Late John B., 39
Jewett, Mr. H. J., and the Chicago & Atlantic, 794
Journal Bearings, Best Material for, 802
Journal Bearings for Cars and Locomotives, 13
Journal Box Jack, Garver's, 292
Journal Friction, Apparatus for Testing in a Lathe, 33
Journal Friction and Train Resistance, Experiments on, 375, 471
Just as Well, 413
Kansas City Cable Railroad, 493
Keely Surpassed, 263
Kentucky Railroad, 221
Killed by Lighting on the Track, 304
Killing Cattle by Wholesale, 413
Kindred Spirits, 709
Krupp's Steel-tired Car Wheels, 891
Krupp's Steel Wheels, Progress of, 567
Lad's Reading of Cross-section Drawing, 252
Lake Shore Apprentices' School, 166
Lake Shore Directors, 310
Lake Superior Iron Ore, 813
Lamp, Plunger Car P. form, 324
Lamp, Watts Combination Lat, 818
Large Stone Shipped, 778
Lathe, Miller's Double Wheel, for Turning Steel-tired Wheels, 139
Lathe, Sellers' Double Axle, 802
Lathe, Swing, Gould & Eberhardt, 432
Lathe for turning Steel-tired Wheels, 131, 177
Lathe, Corrugated Wheel, 224
Lathe, Screw Brake, 32
Lawson Boiler, 657
Length of Service, Premiums for, 169
Leather for Belting, Testing, 611
Left Behind, 152
Legislation for the Protection of Railroad Interests
—Speech of Gen. Devereux at the Chicago Meeting, 241
Lehigh Coal & Navigation Co. Beneficial Fund, 117
Label on Conductor, 670
Label, Stuley a Railroad Company for, 739
Lidgerwood Holding Engines, 178
Lighting, Heating and Ventilating Passenger Cars, 813
Liquid Fuel in California, 759
Locomotive, Baldwin Model, for New South Wales, 191, 827
Locomotive Boiler Construction, 561, 572
Locomotive Boller, Coventry, 715
Locomotive Builders, Testing
Locomotive Building, 6, 21, 35, 61, 76, 83, 107, 140, 148, 166, 181, 204, 220, 234, 251, 264, 280, 332, 318, 364, 372, 387, 412, 422, 442, 459, 475, 491, 500, 520, 530, 536, 567, 581, 597, 619, 655, 645, 670, 695, 715, 732, 747, 764, 773, 794, 810, 827
Locomotive Cabs, Iron, 491
Locomotive Cabs, Iron, 491
Locomotive Compound, "Ore-drought," 529
Locomotive Coupling Rod, Chesapeake & Ohio, 236
Locomotive, "Decapit," 271
Locomotive Engineer, Old, 428
Locomotive Engineer, the eldest, 364, 539
Locomotive Engineers, Drinking, 149
Locomotive Engine, Rotary, 51
Locomotive, English, for Suburban Passenger Traffic, 223
Locomotive, English Tank, Details, 819
Locomotive Exports of the United States, 620
Locomotive Fire-box, Durable, 473
Locomotive Fire-box, Wooten, 591
Locomotive Fire-brick Arch and Extended Smoke Arch in Use on the Wabash, 610
Locomotive Fire-brick Arch and Spark Arresters, 708
Locomotive, Fontaine, La t. of, 81
Locomotive Fuel, Coke for, 412, 556
Locomotive Gaudin, 327
Locomotive, Glasgow & Southwestern Passenger, 514
Locomotive Hammer Blow, Testing, 614
Locomotive Headlights, Electric, 196, 267, 330, 819
Locomotive Indicator Diagrams, Cincinnati, New Orleans & Texas Pacific, 1
Locomotive Indicator Diagrams, "El Gobernador," 544
Locomotive Indicator Diagrams, Norfolk & Western, 614
Locomotive, Long Run Without Repairs, 83, 773, 794
Locomotive, Long Service of, 567
Locomotive Music Box, 635
Locomotive, Norfolk & Western Consolidation, 305
Locomotive Shop Notes in Boston, 817
Locomotive, Old, 272
Locomotive Performance at High Speed, 673
Locomotive Pilot, Something New in, 459
Locomotive Pressure Gauge Mirror, 578
Locomotive, Runaway, 278
Locomotive Running in 5 ft. of Water, 364
Locomotives, American, in New Zealand, 722
Locomotives, Balance Slide Valves for, 337
Locomotives and Cars, Journal Bearings for, 13
Locomotives and Cars, Lubrication of, 658, 707
Locomotives, Compound, Adverse Criticism on, 510
Locomotives, Compound, in Germany, 152
Locomotives, Consumption of Valve Oil on, 644
Locomotives, Early, Cost of Operating, 205
Locomotives, Electric, 124
Locomotives, Electric Headlight for, 166, 267, 300
Locomotives for Export, 220
Locomotives in Fast Passenger Service, 442
Locomotives, Freight, Brakes on, 263
Locomotives, Frozen, 221
Locomotives, Smoke Burning, 284, 415
Locomotive Smoke Stacks, Cast Iron, 491
Locomotives, Old, 331, 571
Locomotives, Origin of Extended Smoke-box for, 427
Locomotives, Rabbit Hunting with, 705
Locomotives for Sunkin-Berber Railway, 263
Locomotive Struck by Lightning, 428
Locomotives Wanted for New South Wales, 715
Locomotive, Tank, for Brooklyn Bridge, 787
Locomotive Valves and Cylinders, Lubricating, 519
Locomotive Whistle for Passenger Service, 354, 372
Locomotive Whistle, Use of, 473
Locomotive with a History, 293
Locomotive Works, Great Northern Railway, 678
Locomotive, Why Called "Sue," 826
Logging Railroads, Evolution into Common Carriers, 670
London Underground Railroad, Danger of, 412
Long Run, 787
Long Terms of Service, 334
Long Train, 166, 204
Looking at the Scenery, 166
Low Pressure Railroad, 136
Lubrication of Cars and Locomotives, 691, 707
Lubricating Locomotive Valves and Cylinders, 519
Luminous Paint for Gradient Posts, 257
Machine Tools at the London Inventors' Exhibition, 577
Malmot Viaduct, 498
Manufacturing, Expanding, for Facing Nuts, 277
Manila Boxes, Test for Adulteration of, 739
Mann Boudier Car, Interior Decoration, 423
Mann Boudier Car in Australia, 491
Manufacturing and Business, 6, 21, 69, 77, 83, 108, 123, 140, 148, 166, 181, 204, 220, 236, 252, 261, 284, 296, 310, 334, 318, 761, 773, 785, 412, 422, 442, 459, 475, 491, 500, 520, 530, 536, 567, 581, 597, 619, 655, 645, 670, 695, 715, 732, 747, 764, 773, 794, 810, 827
Man Who Wanted to Find Out, 511
Master Car Builders' Association—Annual Convention, 321, 378, 385
Master Car Builders' Association—Car Coupler Meeting, 351, 402
Master Car Builders' Association Circulars, 412, 209, 255, 677, 679, 699, 769
Master Car Builders' Club, Winter Programme, 700
Master Car Builders' Convention, Exhibits at, 367
Master Car Painters' Association, 591, 662
Master Mechanics' Association, 85, 941
Master Mechanics' Association Circulars, 226, 244, 821
Master Mechanics' Association, Convention, 304, 471
Massachusetts, Discrimination in Rates in, 183
Massachusetts, Highway Grade Crossings in, 453
Massachusetts Railroad Convention, 579
Massachusetts, Sunday Trains in, 342
Mega Elevated Railroad, 277
Merrill, Late S. S., 177
Mexican Central and Mexican Railway, Competition of, 371
Mexican Central, Passenger Travel on, 337
Mexico, East Time in, 271
Mexico, Population Chart of, 434
Michigan Car-Coupler Test, 662
Michigan Central Standard Road-bed, 148
Military Railroad, Russia, 237
Misplaced Confidence, 111
Misplaced Switches, 182
Missouri, Railroad Property in, 383
Missouri, Railroad Wages in, 60
Monkey Track Bands, 501
Mosquitoes as an Obstruction, 453
Murdered Man as Baggage, 232, 310
Narrow Gauge, 71, 141, 182, 432, 539, 617, 778
National Museum, Contributions Illustrating Steam Transportation, 427
Nervous Prostration, Remarkable Case of, 700
New Dodge, 759
New England Railroad Club, 213, 241, 332, 636
New England Railroad Club on Car Seats, 801
New England Railroad Club on Springs, 817
New England Roadmasters' Association, 677
New Orleans, New E. Exhibition at, 591
New Hampshire Railroads, 438
New Orleans Exhibition, 122, 155, 187, 234
New Orleans, Exhibits at, 217
New Orleans Exposition Awards, 517, 821, 348, 394, 373, 412, 475
New South Wales Model Locomotive, 191
New South Wales, Railroad Progress in, 6
New South Wales Railroads, 438
Newspaper Railroad, 501
New York, Division of Freight at, 81
New York Elevated Road, New Extension, 683
New York Railroad Commission, Annual Report, 34
New Zealand, American Locomotives in, 722
Nicaragua, Railroads in, 232
Norfolk & Western Consolidation Locomotive, 305
Not Dynamic, 393
Note of Bell or Whistle, Changes in, 652
Not Injured, 811
Not New, But Good, 293
Novelties Exhibited, 271, 434
Novelties Exposition, Improvements at, 670
Nut-locks, American Practice as to, 19
Ober Car Ventilator, 704
Old and New, 571
Old Employee, 571
Ornamenting the Road, 203, 310, 342, 413
Packer (Robert A.) Hospital, 310
Packer, W. H., 191, 645, 726, 814
Paint, Metallic Zinc (Urethane), 384
Paint Shop, Piece Work in, 705
Paints, Simple and Compound, Relative Durability, 625
Paint and Varnish on Cars, Cracking of, 692
Paper Weights, 443
Pass, Another Way to Obtain, 709
Passenger Cars, Interior Finish, 411
Passenger Rates, Low Suburban, 147
Passenger Traffic, New Kind, 428
Passes, 255, 575
Passes, Excelsior, 86
Passholder, Conscientious, 310
Pass Swindler, Alleged, 328
Pass Swindler, 108, 221, 314, 476
Pathfinders, 501, 645, 726, 814
Pennsylvania Railroad Specifications for Axles, 716
Pennsylvania Railroad Specifications for Steel Rails, 516
Pennsylvania Railroad Standard Guard-rail, 371, 539
Pennsylvania Railroad Standard Spikes, 771
Pennsylvania Railroad Standard Turnouts and Switches, 517
Peru, Railroads in, 124
Phelps Induction Telegraph, 114, 236, 811
Philadelphia Exposition, Railroad Exhibits, 705
Piece Work in the Railroad Paint Shop, 705
Pie-driver Car, Steam, 388
Piles, Iron, 713
Pintch Gas Light for Cars, 501
Pintch Gas System in Germany, Cost of Lighting Cars by, 491
Pittsburgh Junction Railroad, 84, 211
Pittsburgh Local Passenger Traffic, 469
Planer, Improved Iron, 18
Planimeters, Some Improved Forms of, 515
Planing Machine for Iron, 357
Planing and Matching Machine, Double, 165
Plumbago as a Lubricant, 442
Politics, 117
Porter, H. K. & Co., Tank Locomotive for Brooklyn Bridge, 787
Portland Ferry Transfer, Oregon Railway & Navigation Co., 485
Preservation of Timber, 371
President's Train, Guarding the, 778
Prizes Offered, 373
Profiles, Condensed, 81
Progress in the Substitution of Steel for Iron, 538
Prompt Applicant, 141
Public Works, Civil Engineers' Convention on, 794
Pullman's Electric Bell Cord, 452
Pullman, Town of, 694
Pumps, Large Centrifugal, 413
Pushing the Work, 391
Putting the Wires Underground, 695
Quarantining the Sleepers, 588
Quarantine for Small-pox, 647
Queer Case, 380
Queer People on the Cars, 14
Queer Stranger With Queer Baggage, 795
Quick Work on the Denver & Rio Grande, 635, 668
Rabbit Hunting, 705
Rail Air Compressor, 501
Rail Exports, British, 123, 140, 348, 549, 636, 605, 714
Rail, Heaviest in America, 14
Railroads, Why Do They Break? 212
Rail Markers, 6, 35, 61, 77, 83, 108, 123, 140, 148, 181, 204, 220, 236, 252, 261, 284, 299, 310, 332, 348, 394, 373, 396, 412, 422, 442, 459, 475, 491, 500, 520, 530, 536, 567, 581, 597, 619, 655, 645, 670, 695, 715, 732, 747, 764, 773, 794, 810, 827
Rail Market, Steel, in Europe, 83
Railroad Accounts, Suggestions as to Some Divisions, 177
Railroad Building During the War, 709
Railroad Congress at Brussels, 692, 694
Railroad Construction, Rapid, 181
Railroad Hospital, 108, 310
Railroad Materials and Supplies, Demand for, 661
Railroad Memorial, 406
Railroad Museum, 331
Railroad, Oklahoma, 182
Railroad Policy in France, 441, 458
Railroad Policy in Germany, 529
Railroad President Paralyzed, 529
Railroad Rates and the Iron Trade, 413
Railroad Reading Rooms, 13
Railroad Relics, 365, 572
Railroad Reminders, Some, 588
Railroad Robbery, 182
Railroads at \$100 per Mile, 181
Railroad Sanitation and Cholera, 220, 236
Railroad semi-centennial, 303, 477
Railroad Situation, President Devereux on, 389
Railroad Sociality, 235
Railroad Spiral, 755
Railroads, Food and Now, 533
Railroad Wages in Missouri, 60
Railroad Young Men's Christian Association, 70, 208, 209, 413, 539, 655, 726, 778, 811
Rails and Ballast, American Practice as to, 43
Rails, Broken, and the Cold Weather, 157
Rails, Improvement in Rolling, 394
Rails, Old, Decline in Prices, 519
Rail, Street, New Style of, 340, 358
Rainfall and Floods, Fluctuations of, 372
Red Snow, Use of, 117
Re-servoir System on the Upper Mississippi, 597
Richardson Safety Car Truck, 108
Richmond & Danville Freight Car Truck, 228
Right of Way, Old Titles to, 235
Rivets, Detection of Loose, 275
Rivets, English, Oil-cup, Catalogue of, 35
Road-bed, Michigan Central Standard, 148
Roadmasters' Association of America, 677
Roofing, New Style of, 340, 358
Roofing State, 236
Roundhouse Retort, 828
Rules for Interchange of Cars, Revision, 179
Runaway Train, 141, 413, 747, 828
Running on Three Wheels, 149
Running on Two Tracks, 141
Russian Railroads in Asia, 182
Russian Ship Canal, 337
Russian Standard Box Car, 290
Safety Valve Patent, Richardson, 108, 166
Sagittary Arc Patents, 108, 166, 284, 353
St. John Bridge, 495, 699
Satisfactory Turkey, 14
Saved by a Child, 321
Saxon, Periodical, 413
Scalper's New Scheme, 455
Scalper Scalped, 459
Secured His Rights, 476
Seibert's Locomotive, Catalogue of, 35
Sellers' Double Axle Lathe, 802
Served Him Right, 603
She Deserved a Pass, 743
She Was Saved, 613
Ship Railroad in Nova Scotia, 510
Signal, Fatal, 252
Signal, Improved, 588
Signal from Moving Trains, 810
Signal, Magneto Electric Crossing, 500
Signal, New Block, 373
Signal, Palmer Torpedo, 784
Signal, Railroad Crossing, 423
Signal Stations, New Battery for, 413
Signal and Switch Connection, Interlocking, 556
Signals, 588
Signals, American Pneumatic, 93
Signals, Block System, Invention of, 567
Signals, Electric Train, 33, 620, 656
Signals, Interlocking Apparatus for Drawbridges, 582, 583, 584
Signals on an English Railroad, 427
Signals, Premiums for, 597
Signals, Providing, 604
Signal, Function of, 167
Signal, Use of, 524
Signals and Switches, Interlocking, 157, 162, 166, 635
Signals and Switches, Interlocking, Grand Central Depot, New York, 167
Signal, Train Protection Bar, Interlocking, 540
Signal, Train, Westinghouse, 108
Single-track Engineer, 310
Singular Locomotive, Life, 252
Sleepers, Cast Iron, 594
Slide Valves, Balance, 337
Slide Valves, Friction of, 339
Snow Block, 167
Snow Plow, New Kind, 141
Snow and Shop Work, 157
Snow Shovel, Rotary Steam, 141, 204, 252, 256
Snow Shovel, Rotary Steam, 141, 204, 252, 256
Something to Write About, 705
Somnambulist on the Train, 630
Soudan, Military Railroad in the, 182
South Africa, Railroad Extension in, 208
South America, Railroad Extension in, 208
Southern Railroads During the War, 679
South Pennsylvania Sale, President Roberts on, 591
Speculating on Injunction Suits, 791
Spikes, Pennsylvania Railroad Standard, 771
Spirals, Railroad, 755
Spring-plate Steel-tired Car Wheel, 269
Springs, English Laminated, 501
Stand Pipe, Dodge Railroad, 467
Station, Moving a, 727
Station, New Passenger, in Birmingham, 398
Station Platform, 398
Stealing the Pay Car, 459
Stealing a Train, 342
Steamboat, American, for the Nile, 181
Steam Excavator, Dunbar & Ruston's, 734
Steam Hammer, Large, 460
Steam Shovel and Reckling Car, 100
Steam Street Car Motors, 290, 501
Steam Street Railroads, 373
Steam Transportation, Contributions to National Museum Illustrating, 427
Steel Bolts, 579
Steel Castings, 579
Steel Castings, Engineers', 636
Steel Castings, Life, 567
Steel for Iron, Progress in the Substitution of, 538
Steel Plants, Small, 567
Steel Rail, New Style of, 540
Steel Railroad Ties, 556
Steel Rails, Pennsylvania Railroad Specifications for, 516
Steel Rails, Working Old, 108
Steel Sleepers in England, 747
Steel-tired Car Wheel, 891
Steel-tired Car Wheels, Turning, 786
Steel-tired vs. Chilled Wheels, 723, 737
Steel-tired Wheels, 67
Steel Tires, Manufacture of, 483
Steel Works, New, in the United States, 403
Stephenson, George, How He Bought a Bonnet, 398
Stems Institute Equations, 150
Stopping, 652
Story Corrected, 188
Story With a Moral, 312
Sunday Trains, 342, 778
Sunday Work on English Railroads, 709
Sunday Work on Railroads, 571, 693
Sunday Work, Stopping, 658
Sunderland, How He Engine, 589
Survey Which Do Not Agree, 540
Suspicious Person, 149
Susquehanna Shops of the Erie, 81
Switch, New Style of, 457
Switch and Signal Connection, Interlocking, 556
Switchwoman, 117
Tamping Machine, Railroad, 453
Tay Bridge, The New, 778
Tee Time, 589
Technical Schools, 835, 400
Technological School, Baltimore & Ohio, 83, 100, 818
Technique Ship Railroad and the Suez Canal, 124
Telegaphing from Moving Trains, 86, 114, 230, 811
Telegraph, Phelps Induction, 83, 114, 230, 811
Telegraph and Train Rules, Uniform, 289
Telegraph Wire, Long Spans of, 284
Telpheage, 722
Tennessee, Notes in, 238
Terminal Facilities, Poston, 399
Test Examination Wanted, Another, 726
That Window, 413
They Called It an Even Thing, 71
They Waited for the Cow, 86
Thirty Years Ago, 449
Threads, Fine pitched for Bolts, 540
Through Car Service over Connecting Roads, 674
Ticket, Expensive, 757
Ticket Holder, Cliley's, 148
Tickets, Canceled Erie, at Large, 381
Tickets, History of an Issue of, 388
Tickets Stolen, 709
Ties, 25
Ties on French Railroads, 157
Ties, Steel Railroad, 556
Tillotson, Late J. G., 115
Timber, Preservation of, 371
Tire Rolling Machine, Improved Double, 247
Tires, Steel, Manufacture of, 482
Tobogganing, Railroad, 141
Too Curious, 617
Too Fast for Him, 811
Too Much Culture, 149
Took His Own Dividend, 635
Took Him, Eberhardt's, 413, 787
Torpedo Signal, Palmer, 784
Tough Bull, 413
Track Drainage, 443
Track in Germany, Questions Concerning, 156
Track, Prizes for Excellence of, 709
Track Supplies, Inspection of, 290
Train Accident Report—Correction, 688
Train Accommodations, Massachusetts Commission Decision, 699
Train Boy, 453
Train Fire Extinguisher, 88, 194
Train Indicator, Automatic, 26
Trainmen, Considerate, 608
Trainmen, Co-operative Restaurant for, 13
Train Orders, Old Style, 390
Train Orders and Rules, Uniform, 421
Train, Passenger Stealing a, 727
Train Resistance and Journal Friction, Experiments on, 356, 474
Train Robber, Darling, 208
Train Robbers, 27, 114, 226, 571, 588
Train Robbers, Musical, 364
Train Robbers Sentenced, 13
Train Robber's Stratagem, 455
Train, Runaway, 141, 413, 747, 828
Trains, Flagging Delayed, 101
Trains, Great Eastern Railway Express, Comparative Dimensions of, 578
Train Signal Apparatus, Westinghouse, 108
Trains, Movement of, in a Fog, 759
Trains, Proportion of Load to Weight, 261
Train Stopped by Antelope, 603
Train Talk, 310
Train and Telegraph Rules, Uniform, 289
Train Wrecker, Girl, 843
Train Wrecker, J. H., 13
Train Wreckers, Boy, 38, 391
Train Wreckers in Russia, 380
Train Wreckers, Youthful, 635
Train Wrecker, Woman, 21
Train Wrecking, 117, 316, 325
Train Wrecking, Attempt at, 23, 476, 603, 629
Train Wrecking by Dynamite, 242, 476, 501, 558
Tramps, 145, 162, 341, 618
Travelers' Protective Union, New, 591
Tree on the Track, 238
Tricycle, English Railroad, 605
Trunk Lines Agreement, 723, 737
Trunk Line Organization and Rates, 737
Trunks That Were Not Smashed, 533
Tunes, New Method of Drawing, 286
Tunnel, Burning a, 21
Tunnel Drilling, Fastest, 567
Tunneling Device, Hall's Subaqueous, 244
Tunneling Through Rock, Machine, 252
Tunnel to Prince Edward Island, Proposed, 517, 597
Tunnel, Proposed, Under Northumberland Straits, 252
Tunnel, Severn, 619
Tunnel, Sewer, in Brooklyn, 101
Tunnels on South Pennsylvania Railroad, 157
Turner Bead Freight Brake, 124
Turning Steel-tired Car Wheels on the Axles, 398
Turnouts and Crossings, Pennsylvania Railroad Standard, 771
Twist Drills, 418
Tyler, Mr. H., Speech at Grand Trunk Meeting, 805
Urethane (Metallic Zinc) Paint, 338
Underground Cables in New York City, 716
Underground Electric Cables, 773
Uniforms, Railroad, 289
Uniform Train Orders and Rules, 421
United States Railroads in 1894, 497
Unlucky Name, 571
Unpleasant Traveling Companion, 727
Usual Way, 60
Vaccination at the Border, 670
Vaccinating Trainmen, 620, 700
Valuable Dog, 413
Valuable Train, 203
Valve, Balance, Balanced, 740
Valve Motion, 84
Vanderbilt, The Late Wm. H., 785
Ventilating and Heating Cars, 808
Ventilating and Heating Cars, Creamer System
Ventilation of Mann Boudier Cars, 635
Very Close Call, 342
Virginia Blast Furnace, A, 778
Virginia, Notes in—Richmond, 107, 123
Virginia, Notes in—Roanoke Machine Works, 169
Wadley Railroad Memorial, 436
Wagon, 443
Waiting for Robbers, 60
Waking Up the Hotel Guests, 108
Wash-out, Big, 608
Wash-outs, 679
Waste in the Workshop, 227
Watchmen's Time Detectors, 77
Water, 141
Water Gauge, Improved, 292
Water Power, Excavation and Embankment by, 199
Water-proof Joint for Iron Roofing, 838
Watts Combination Tail Lap, 814
Weather Observations on a Railroad, 265, 412
Well Offered, 825
Western Railroads, New Association—President Inghall's Speech at Chicago Meeting, 341
Western Railway Club, 83, 167
Western Society of Engineers, 77, 84, 124, 110, 119, 208, 281, 316, 412, 475, 491, 524, 567, 597, 778, 810
Westinghouse Automatic Brake on Freight Trains, 365
Westinghouse Freight Brake, Experience With, 261
Westinghouse Train Signal Apparatus, 108
West Shore Purchase, Mr. Pink's Views on, 561
What Is It, 536
Wheels, Steel-tired vs. Chilled, 721, 737
Whistle, Locomotive, for Passenger Service, 354
Whistles, Cast Iron, 704
Whistling in the Cars, 690
Why, 141
Why the Locomotive is Called "She," 827
Wicker Human Statue, 749
Wind Mills, Tests of, 581
Wind Power on a Draw Bridge, 300
Woman in the Field, 363
Wonderful Machine, 229
Wooden Railroad, 387
Wood's Fast Feeding Flooring Machine, 496
Wooten Locomotive Fire-box, 501
Worthy Improvements, 423
Wrecking Plant, English, 451
Wrecking Derrick, English Self-Propelling, 381

